THE HORTICULTURIST
EDITED BY
HENRY T. WILLIAMS.
E. SEARS, SC.

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Notes for Cottage Gardeners.

BY THE EDITOR.

Japan Lilies as House Plants.

THE beautiful Japan Lilies, introduced within a few years past, have proved so well adapted to our climate, so easily grown, and are now so reasonable in price, that we would call special attention to their use in window gardens and pots. We had a beautiful Lilium Auratum last year in flower in our window, which developed two splendid flowers, eight inches across, and diffused a most exquisite perfume throughout the room. It is, in truth, the most magnificent of all foreign flowers yet introduced into this country for popular use.

The beautiful varieties of the Lilium Lancifolium Album, Rubrum, Roseum, and Longiflorum are still cheaper, and can be grown anywhere. They thrive under the most careless treatment, and throw out tall stalks of long, splendidly-colored blossoms, from crimson to pure white.

A pot of each of the above five varieties of lily will form a window garden alone when in bloom. They grow with the greatest vigor, and rarely fail to reward the interested lover of flowers with one or more magnificent spikes of bloom.

Insects in the Garden.

Insects, both in the garden, greenhouse and orchard, are yearly becoming more and more troublesome and destructive. In some localities their excess of life deprives the cultivator of all profit in his occupation, and turns his beautiful trees or shrubs into a sickly mass of foliage. How shall we get rid of them. Here is a method we have used with more or less success :

Carbolic acid preparations, in the form of soap, or as a plant protector, or as a powder, have an admirable effect in the destruction of insects. Carbolic acid is a natural distillation of coal tar, and in its crude state is a poison alike to man or plant, but properly diluted and compounded it can be used in a great variety of forms, either as disinfectant, or as cleansing soap, or as insect destroyer. In the last particular we have witnessed some experiments which lead us to believe it will prove of great value to all horticulturists. No insect can stand either its fumes or its application. Like oil, it is certain death. We have tried it on grape vines or rare bushes infected with worms, and found it excellent. A pound of the article dissolved in fifteen or twenty gallons of water, forms a large quantity, which can be forced by a syringe over the entire plant or tree, and one or two applications drive away all worms, flies or insects. Instances have been related, from trustworthy

sources, of the use of the same article on greenhouse plants, and has proved a complete remedy. And in like manner it has been used as a wash for peach trees, and proved efficacious in destroying the borer. While, for all worms, slugs, flies or insects that infest the leaves or bark of tender shrubs or trees, it is an admirable specific. It must also be remembered that the *acid*, if used too strong, is also destructive to the plants themselves. One pound, dissolved in ten gallons of water, is strong enough for vigorous, strong growing plants, while one pound in fifteen to twenty is sufficient for all having a more delicate habit. Sprinkle well over the plants, and wash trees frequently, in order to give it full effect. We have seen ants and worms crawl away from the very smell of it, in haste, and flies, or winged insects, leave in terror. It seems to be the only agent, thus far, of which such insects are afraid, and I would advise a general trial, in order that the results of individual experiments may be elicited.

Experiments by chemists show that it is destructive to all vermin, all low forms of animal life, and prevents or destroys fungus life and fungoid growth. May we not hope that this will prove the long wished for antidote to insect devastation in our horticultural labors? I believe it has the germ of good that will prove of lasting benefit to the horticultural community.

Conover's Colossal Asparagus—The Original Plantation.

We paid a visit lately to the original grounds of the Conover's Colossal Asparagus, at Jamaica, L. I. At present but four acres are planted and in bearing condition. The ground is light and poor; the plants, now in their fourth year, were planted in rows five and a half feet apart, and four feet distant in the rows. The owner was cutting freely large, noble stalks of tender succulent stems, measuring a full inch in diameter, and from two to three inches in circumference. There was no unusual preparation of the ground, no liberal manure used, no extra cultivation. In comparison with the common field asparagus, and also the Oyster Bay variety, grown close at hand, there could be observed a wonderful difference. Both in size and productiveness the Colossal really deserves its name, and was fully double the size of any other specimen we had ever seen. While other beds had been deeply manured annually for five years, until the ground was literally filled with richness, the bed of Colossal asparagus, only a little distance off, and one year younger, was cutting shoots both double in size and double in quantity. Its merits, we believe, have not been exaggerated. A few bunches, handed us by the obliging proprietor, Mr. A. Van Siclen, were carried home and the *quality* submitted to the test. *That*, too, proved triumphant, juicy, succulent, and sweet to the very base, without any waste; it proved one of the most delicious feasts we have ever enjoyed.

An important fact came under our observation, which deserves special notice by all asparagus growers. Fully two-thirds of Mr. Van Siclen's crop was lost, by the attack of the asparagus fly. This fly, just as the shoot pushes its way above ground and begins to grow green, alights upon it, punctures it, and nips it here and there, seeming to poison it, for it at once curls over and grows sideways or downward. Its value is entirely lost for market purposes, and the profits suffer in consequence. In the asparagus region of Long Island the fly has become a perfect pest, casting disappointment into every gardener's heart, and cutting off his best and most valuable plants. The flies swarm in myriads, and go from farm to farm and nip fully two-thirds of all the asparagus shoots, and though new shoots constantly appear, the flies, more watchful than the grower, take possession first and rule the field. Mr. Van Siclen told the writer that if this pest continues much longer, asparagus growing must either be given up entirely, or else there must be a change in the *method of production*. His proposition is this: instead of permitting the shoots to grow above the surface of the level of the ground and become spoiled by the flies just as it is turning green and becoming fit for market, he ridges his land close to the plants, cuts these ridges into hills and mounds fully twelve to eighteen inches high, covering the plants or shoots completely. Here they are allowed to grow undisturbed, and just as the top appears above the surface of the hill, and before it is attacked by the flies (for they do not bite until turning green), the chisel is run down and the shoot cut off; thus practically introducing the method of *blanched or white asparagus*. In the market this white asparagus brings a high price, being more delicate and tender, nevertheless there is a popular prejudice against it as being unhealthy. We believe the opinion unfounded in fact, as the opportunity we had

for examination and personal test satisfied us it is equally healthy and nutritious. We have given the detail of our observation, as we would be unwilling to have any enter the field of *asparagus growing, for profit*, without knowing some of the difficulties attending the occupation.

This new variety is of unquestionable profit. The bunches were selling for $15 per doz. or $1.25 each; but if produced in large quantity in the future, I fully believe they would command at least $5 per dozen steadily. A mistaken impression has hitherto prevailed with regard to close planting of asparagus. Mr. Henderson recommends 20,000 plants per acre, and other writers from two feet by two, and three feet by three, as low as 5,000 plants per acre. If any one could see the vigorous growth of roots of the new variety, they would at once perceive *cramping plants* together is alike deleterious to their health and productiveness. Mr. Van Siclen's bed is five and a half feet by four. I do not consider it too wide. The plants have an abundance of room, the hills grow strong, throw up stalks fine, large and vigorous, and in course of time these hills will be permanent and productive, to an extent that would astonish those accustomed to close culture in rows.

The profits of asparagus culture have been greatly exaggerated. Few need expect over $200 per acre as a constant income. The Colossal asparagus can be cut a little in its third year from seed; in its fourth quite freely, and in its fifth year a full crop. Two thousand bunches per acre would be a very handsome estimate, and one thousand is a much safer guide. But all growers must expect attacks of the fly. A sure remedy against it would be worth a fortune. New plantations might escape for a while, but the flies would come at last.

Laying Down a Lawn.

REFERRING to Prof. Eastman's unfortunate failure in his efforts to produce a fine lawn by the usually successful method of sowing grass seeds, I beg to remark that, having been somewhat extensively engaged in this business for many years, I have found no difficulty whatever in the matter.

Of course it is essential that the soil should be thoroughly prepared, whether it is to be covered with sod or sown with seed; the preparation is alike in either case. To cover several acres with sod is a very expensive operation, and in very many cases quite impracticable; obnoxious weeds, such as garlic, etc., are frequently introduced with the sod, which, after all, does not make so perfect and satisfactory a lawn as a proper admixture of selected seeds.

I find the following mixture to produce the most perfect permanent lawn, viz:

One bushel Red Top (*Agrostis vulgaris*).
Two bushels June grass (*Poa pratense*).
One quart Timothy (*Phleum pratense*).
Two pounds White clover (*Trifolium repens*).

These quantities to be mixed and applied to each acre of land.

A lawn sown the last week of March of the present year, has already been twice mown, and is now a well set, thick sod.

WILLIAM SAUNDERS.

A White Grape.

EDITOR HORTICULTURIST: You ask in the present number what we have to say about the Martha? Simply this, that it is, in our opinion, the most valuable white grape we have yet tried, and we have been getting every new one that has been sent out. We could show you Croton, Lorain, Golden Champion, all in full blast. So you see we go in for the white ones.

Martha is not as large in bush and berry as Concord, but nearly so. As white as any grape; quality superior to Concord; hardy and productive as its parent (the Concord,. If it has a fault, it is its exceeding tender, thin skin, which may be a drawback to distant carriage. I notice the bunches this season, larger than ever before. The Croton, from all accounts, may be superior in quality, size, etc., but we must wait to see if it will prove hardy and free from mildew. If it is quite exempt from the latter, and hardy, it is the first Vitis Vinifera, except Wehawken, that we have tried. Any one who thinks it a

hybrid will find themselves mistaken. If it escapes mildew, I am the better pleased that it is a full-blooded foreigner; for then we have a large white grape of great excellence, from all we have heard of it. We are not ashamed of having originated the Martha.

BLUFFTON, MO. S. MILLER.

Strawberries—Culture—Varieties.

BY HENRY T. HARRIS.

"TOO many cooks spoil the broth"—"too many irons in the fire, some will burn." These are true old maxims; and one equally true is, that too many varieties of strawberries in cultivation by one person, some, or all, will be neglected. Hence, to secure the best success, ascertain three or four kinds the best adapted to your grounds and climate, then give them the best culture possible. First, then, an early, medium, and late variety should be chosen to insure a long crop of this matchless fruit; and for this latitude no better can be had than Downer for early, Wilson for medium, and Green Prolific for late. With these three kinds, we believe any one here can have all that could be desired from May 15th to June 15th. The Green Prolific is the very handsomest, largest (all large), and most desirable berry grown; and I would not be without it under any sort of state of case. Of course it does not equal the Wilson in firmness; but for beauty, flavor, and productiveness, it has no nearer competitor on my grounds; and had good old Seth Boyden never done any other praiseworthy thing, his propagation of this superb berry would entitle him to all honor, all glory, from the horticultural public. Why will people cultivate strawberries in matted beds? Simply because that is the "wrongest" way possible, we suppose.

If one had started out to learn the meanest way to cultivate them, he certainly would have settled down on this matted bed business. Shame on it! If we had our way, a fellow should never eat or sell strawberries who would not cultivate them as they should be—in stools; and we know that one who tries this mode once will never adopt any other.

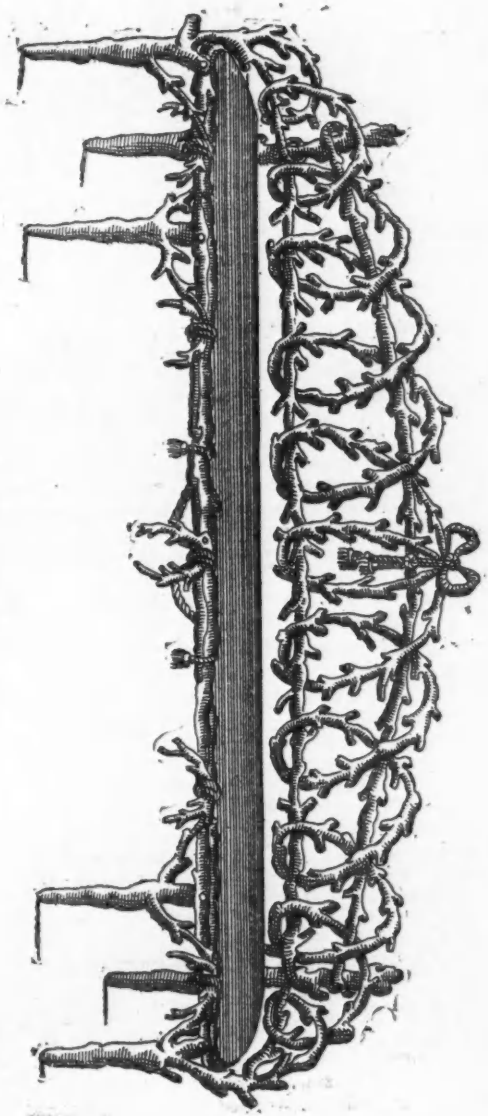
When you try it you will learn that half the labor will give you double the yield of larger, finer fruit, and then the picking is done with less than half the work. Grown thus, a bed of Wilson or Green Prolific of 500 plants (say fifty feet square), will yield, if mulched winter, spring, and summer, forty or fifty gallons of splendid fruit. Cut off the runners—cut them off—don't let a single one take root—keep the weeds down and the soil stirred at the proper time, and the mulch put on, and then behold the magnificent reward that awaits you when the "Lord of the Harvest" turns the season round!

But what can we say to induce you to raise your own *plants* in the proper way? I shall tell you how, and then you can do or not do, as you may prefer. Of course I am now writing to those who desire to cultivate for home use. First, then, procure 500 or 1,000 two inch pots, that will cost about a cent each. Fill them with good soil and plunge them in your bed any time in June or July, and lay a runner on each—lay on a clod to hold it fast. By September a fine plant will fill each pot. These may be left in the beds until spring, and then set out, or the runner may be cut any time in September and put out in a well prepared bed and immediately mulched. I prefer the latter plan, as the following spring a fair crop will be raised. Plants raised in this way are worth far more than any other. The pots can be used for a number of years.

STANFORD, KY.

Designs for Rustic Settees.

WE introduce, this month, several fine designs of settees for park and lawn use. Fig. 1 is an excellent illustration of a style of rustic work very popular in Belgium and Germany. It is made entirely of wood, twisted in a skillful and picturesque manner. Figures 2, 3, 4, represent several excellent designs of a highly ornate character, constructed of iron, and intended for lawn, piazza, or balcony uses, rather than for the public park. They are taken from the originals, constructed by the Composite iron Works Co. of this city. Iron garden furniture is so necessary now, as conveniences in rural embellishments, that the manufacturers of articles of this nature are constantly on the alert devising new and exquisite designs to please the lovers of rural taste. We will therefore present, from time to time, illustrations of such as are especially noteworthy and tasteful.



Design for Rustic Settee.

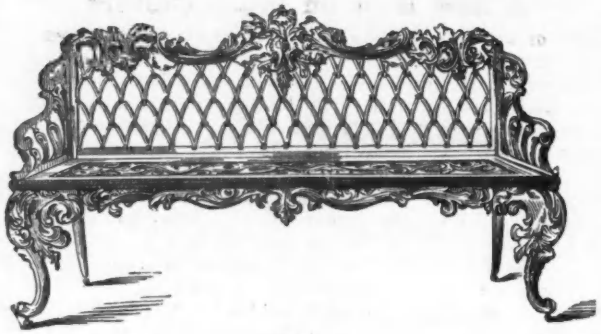


Fig. 1.

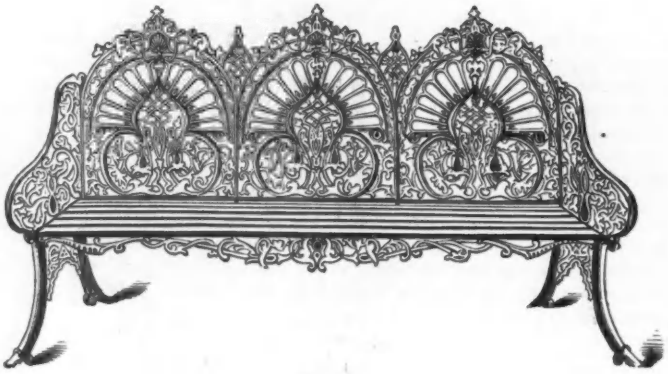


Fig. 2.

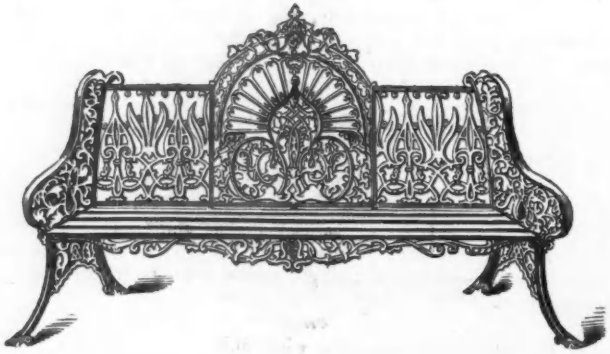


Fig. 3.

Designs for Lawn or Balcony Settees.

A New Book on Peach Culture.

THE past five or ten years have witnessed an unusual development of the traffic in peaches, and an enormous production, sufficient to astonish those accustomed to moderate figures. During the last peach season the fruit trains from Delaware often exceeded one hundred cars daily, each car holding 500 baskets of $\frac{8}{8}$ of a peck, while the total production of the entire Delaware Peninsula reached over 3,000,000 baskets. At such a time, when the interest in peaches is most intense, a book on Peach Culture is very opportune and serviceable. The present volume is edited by James Alexander Fulton, of Dover, Delaware, a large owner of peach orchards, and located in the very centre of the best peach producing region of the State. His opportunities for observation have been unusually favorable, while his experience insures to the book the best possible element of *practical worth*. It contains 190 pages of clearly printed text, and discusses the subject from the selection of the site for a nursery, down through the management of seed, budding, nursery cultivation, sales, planting in orchards, orchard treatment, marketing, baskets and packages, commission merchants, shippers, production, profits, insects and diseases. There is added also a full list of varieties, a chapter on peach culture under glass, and a few fancy ornamental kinds are described. We extract a few items of interest.

Height of Head.

"There is some diversity of opinion in regard to the height of the head of a tree; or, rather, at what height the tree should be allowed to commence to form. We think *three* feet the proper height. Allowing the limbs to stand at this point, they will naturally strike upward at an acute angle with the stem, and thus allow room enough to cultivate around them with a mule or low horse.

"The arguments advanced by those who advocate low heads are two: *First*—that the fruit is nearer the ground, more easily picked, and not so likely to break down the branches. *Second*—that the low heads withstand the storm better, and are not so easily blown down. But the answer to all this is, that when the heads are low, the fruit does not ripen early or well on the low branches, and is generally small in size and inferior in quality. In time the lower branches, for the want of sufficient air and light, die, and have to be removed, thus leaving the tree with less bearing wood, or in worse shape than if it had been trimmed up to the proper height at first.

How Commission Men Defraud Growers.

"Some of the consignees are upright, honest men, who do a fair and legitimate business, on business principles; but many of them are swindlers and sharpers, whose sole object is to make money for the time, who have no reputation to lose, and who do not aim to gain one. They are unscrupulous in their statements, importunate in their solicitations for consignments, and wholly unreliable in making returns. Many others have stands of their own, where they sell at retail, upon receiving a consignment. There may be many fine baskets of fruit worth $1.50 each, and sold as such, but the whole consignment is returned to the grower at 75c., and the commission merchant pockets the difference, represented as follows:

SALES SHOULD BE,					AS RETURNED.	
50	baskets	fine at	$1 50	$75 00	200 baskets at 75 cents	$150 00
100	"	good at	1 00	100 00		
75	"	fair at	75	56 25	Difference	$93 75
25	"	poor at	50	12 50		
				$243 75		

"This difference the dishonest consignee pockets, and absolutely *cheats* his confiding customer out of this amount in a single transaction. We have reliable information that some parties have actually made enough, in a single season from their swindling operations, to retire from business altogether.

Profits

for an orchard of 10 acres, 1,000 trees, four years old.

First cost of planting	$150 00
Interest, four years	36 00
	$186 00

First crop of peaches, 1,000 baskets, at 40 cents net	$400 00
Second year there may be only 200 baskets, but owing to a scanty crop the price is doubled and the planter gets 80 cents a basket on the trees	160 00
Third year, full crop, 3,000 baskets, at 40 cents	1,200 00
Fourth year a total failure.	
Four years of bearing gives a net income of	$1,574 00
Or an annual rent of	393 50
Or per acre	39 35

Hence it follows that land which will yield $40 per acre per annum should not be planted in peaches.

Varieties.

By vote, the old Mixon Free has received the first place of honor, and the Morris White the second.

Were we going to plant an orchard, and restricted to *six varieties*, we would select three white and three yellow sorts.

WHITE.	YELLOW.
Hale's Early,	Crawford's Early,
Old Mixon Free,	Reeves' Favorite,
Stump the World.	Crawford's Late.

If we enlarged it to twelve, they should be these:

WHITE.	YELLOW.
Hale's Early,	Crawford's Early,
Early York,	Yellow Rare-ripe,
Large Early York,	Reeves' Favorite,
Moore's Favorite,	Crawford's Late.
Old Mixon Free,	
Red Rare-ripe,	
Stump the World,	
Ward's Late.	

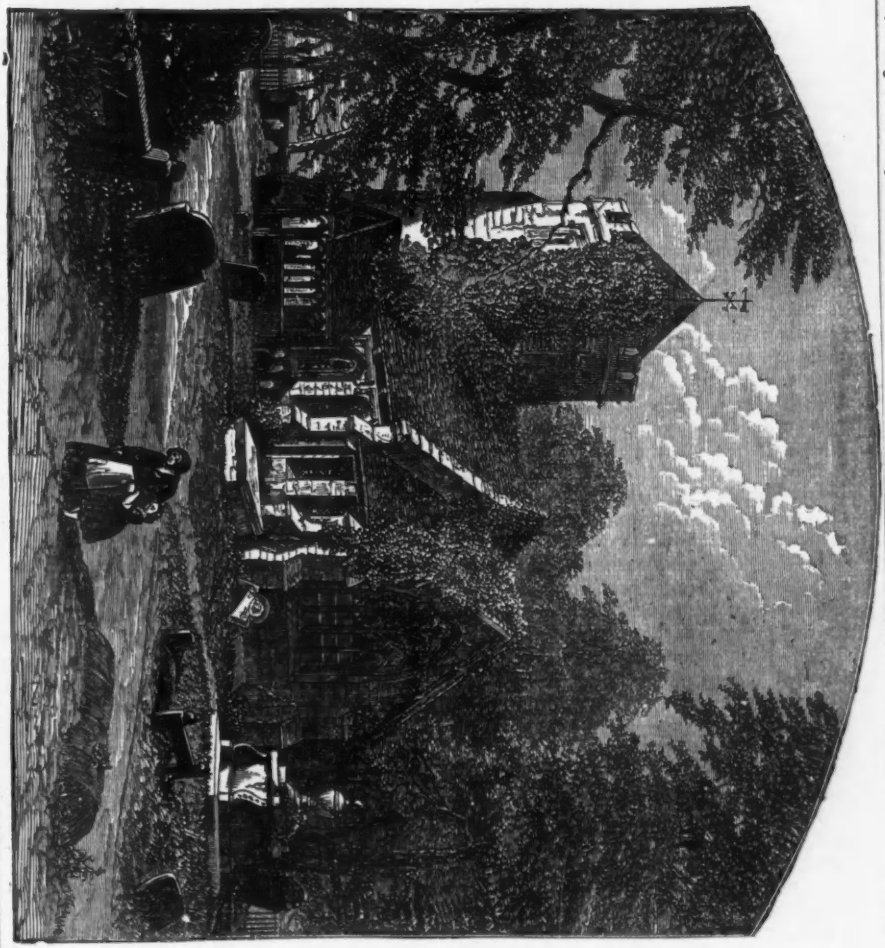
The description of the relative value of the different varieties occupies a large part of the volume, and is quite entertaining. We observe he is disposed to retain the Hale's Early.

"It is capable of standing harder frosts than any known variety. This and its early ripening give it great value both for garden and orchard, for domestic use, and for exportation. That it is subject to rot, more or less on the tree, we readily believe. This we think is mainly owing to *soil*. We have never known an orchard, planted on *high*, *dry*, *sandy* land, to be seriously injured by rot. The rotting has usually occurred on the low lands, badly drained, or on clayey soil. The result of our observation goes to prove that in Delaware, at least, Hale's Early may be successfully and profitably cultivated in all her light sandy loams, but not on her clay or low lands."

This new volume is quite entertaining, and especially serviceable to all horticulturists.

An English Rural Church.

OUR illustration represents one of the frequent rural churches of English scenery, with its ivy covered walls and massive tower, beautiful in their age and quaintness. We lose none of our enjoyment and appreciation for the pleasures of the garden or lawn while we have a sketch of some pleasant rural scene like this thrown in as a relief to our horticultural labors. The English ivy seems inseparably connected with all church architecture and association in the old world. It grows everywhere, and in an incredibly short space of time mounts the bare walls and covers the side, from window to roof, with its graceful but sombre festoons of foliage. Old abbeys and cathedrals advanced in age, or just falling into ruins, seem to grow more and more beautiful as the artful hand of Nature, with its "*ivy green*," steps in and skillfully hides their bareness or deformities. It may be often seen hiding and beautifying the trunks of old trees, or luxuriating in rural cemeteries, growing everywhere with a luxuriance and beauty surpassing all description.



The Wild Blackberry and Raspberry of the Northern States.

TO those unacquainted with the bounteous growth of these fruits on the outlying, and in many instances, waste lands scattered through the several States north of the Potomac and Ohio rivers, and only reading of their domestic cultivation in the columns of our agricultural and horticultural journals, it would seem as though they were only produced in the gardens and home lots of the cultivators. But the fact is far otherwise. The great bulk of the blackberries, and raspberries, to some extent, which are exposed for sale, both in our city markets as well as in those of the smaller towns and villages, are of wild native growth.

Fifty years ago neither of these fruits were known in garden cultivation in the United States; and it is even less than thirty years since any particular attention has been paid to propagating them in gardens at all for market purposes, and a less number of years since they have been *civilized* into *varieties* by painstaking cultivators. Now no *home* garden is considered complete without more or less varieties of each of the blackberry and raspberry being cultivated for family use, while hundreds, even thousands of acres are profitably grown throughout the country for market purposes alone. Soils are examined to ascertain whether they are of suitable composition or fertility; localities are carefully sought as being the best fitted for their production; manures are experimented and selections made from them, as best applied for their production and flavor; treatises and books are written by experienced cultivators on the best methods of originating new varieties; propagating, planting, tending, gathering, and taking them to market. Their cultivation and production, in fact, is reduced to both a science and a trade.

It is well that these things are so. They afford the people a rare luxury in the enjoyment of rare fruits, and at cheap rates, which without this cultivation we could only partially obtain. They add to our health, our pleasure, our enjoyment, aside from the attendant benefit of encouraging a vast amount of light labor to infirm men, and women, and children, who in their proper seasons, are engaged in gathering them. So much for the *domestic* fruits of the kinds in question.

But, has any one taken into consideration the incredible amount of choice wild blackberries and raspberries that grow throughout the country in almost barren fields; along neglected waysides; in newly disforested lands; along the sides of dilapidated stone walls; or throughout old mossy pasture fields filled with rocks either in place, or huge boulders, when, for productive uses, the soil is hardly worth the annual taxes paid on it? I fancy not. Nor, as far as I have yet discovered, has any one taken into consideration the *profitable* use to which a great many of these waste lands may be turned, when properly cared for and put into such production.

Such lands mostly lie in secluded places, away from thickly traveled ways or navigable streams. They are frequently difficult of access, high, hilly, or mountainous, and yet within short distances of large cities, towns and villages. Their soils are barren to the growth of either grain or grass to any extent—in short, an almost absolute waste. Yet in their frosty, heavy, moist surfaces the choicest blackberries and raspberries that ever touched the human palate grow in the most luxuriant abundance. We know localities on these very soils where the best blackberry grows six or eight feet high, bearing the largest and sweetest of fruit, and in the greatest abundance; and of the red raspberry in equal luxuriance of growth and production, according to their natures; and none but the secluded rural population thinly scattered among them know of their existence or profit by their gathering.

Since our modern railways have penetrated many of our mountain fastnesses, these fruits have been discovered to much greater extent than before, and their berry harvests eagerly sought for market purposes. The lands on which they grow are ragged and wild. Their owners, many of them living at a distance, supposing them almost worthless, rent them out for a trifle more than the taxes assessed upon them, and the humble people living in their vicinities feel themselves at liberty to gather their fruits and make the best they can of them. In many places the boys, women, and girls of the smaller villages—during the berrying season—make a regular business of daily going out, for miles away, and picking these fruits, taking them to the nearest railway stations, and selling them to the dealers, who congregate there to take them to market. The green mountain ranges of New England, with the numerous spurs which run out from them; from southern Connecticut to

Lake Memphramagog in Vermont; the highlands of the Hudson river; the hills and dells along the eastern section of the Erie railway; the thousand humps and gorges of the anthracite coal fields of Pennsylvania; even lands partially adapted to agriculture near these localities, all yield more or less of these choice fruits, which are annually increasing of their abundance to our populous market places. All that is needed is a better care and protection of these lands to turn them, to their owners, into profitable investments for the growth of these fruits.

In passing over the Boston and Albany railway, not long since, in going westward through Massachusetts, a few well-dressed young lads and girls entered the cars at the pleasant town of Westfield, which lies beautifully sheltered in its own sunny valley just under the declining spurs of the green mountain ranges. In conversation with them soon after they entered the cars, I found they lived in one of the rough mountain towns on the way to Albany. There was a little farming done there, as they told me, but the most profitable pursuit of the younger population was that of "berrying" during the summer months—blackberries, raspberries and huckleberries being the fruits of their labors. "They grew all over the fields, on everybody's land; no leave was asked to pick them, nor were they ever forbidden." Many nimble pickers would each gather one, two, or even three bushels in a day, and they were sold to the dealers at the railway stations for ten, twelve or fifteen cents a quart, as the demand might happen. And that is but a sample of hundreds of other places of equally eligible location. I met a young man near there, recently married, and about settling in a high, rocky, sterile place in the neighborhood. I asked him why he did not go to the west where land was cheap, and he could grow grain, grass and stock in the greatest abundance. "Why, sir," said he, "I can do better here. I can, with my little means, make more *clean money* by picking blackberries, raspberries, and huckleberries on these mountains than I can by farming on the best lands in Illinois."

This was all new to me, but on thinking the matter over, it may be so. In my own New England boyhood I remember these fruits in such localities as I have described, growing in the greatest abundance, food only for the birds, and what an innocent, delightful pleasure we children enjoyed in gathering them only for our own and the household's luxury. There was no market for those berries then, no railways to take them to the villages, towns, or distant cities in a few hours from the gathering, and at paying prices for the labor, as now.

In these *natural* localities for such fruits they need no cultivation. A fire now and then scorching over the land is the best profitable manure for them. All they need is protection from sheep, goats, or cattle. Fifties or hundreds of bushels of these fruits will grow to the acre, and if the owners of such land would only give them proper attention, they could be grown in greater quantities than they have ever yet produced. Let it become a business in these localities; systematize it, encourage it. Even those sterile rocky mountains and their gorges, where only worthless ferns and laurels now grow, may teem with these delicious fruits in untold abundance.

The huckleberry (whortleberry, properly), which cannot be brought into either garden or field *cultivation*, may be made profitable in these rocky wastes, well paying for the labor of gathering and marketing, besides yielding our towns people a most healthful luxury.

L. F. A.

New Western Fruits.

FOR the last three years G. P. Peffer, of Pewaukee, Wisconsin, has exhibited at the State Fair seedlings of his own growth, competing for the premium offered by the State Horticultural Society, of $50 for the best seedling adapted to the northwest; quality and hardiness being the requisites for winning the prize. At the exhibition of 1868 the award was made to Mr. Peffer, and at a subsequent meeting of the society it was named

The Pewaukee,

in reference to its place of nativity, and recommended for trial throughout the State. The fruit is medium to large, round obovate, waved; cavity, small; basin, shallow and slightly plaited; calyx, rather large; stem, variable in length, with a fleshy substance on one side, sometimes very large, from an half to one inch in length; skin, dull red on a bright yellow

ground, with whitish dots all over; flesh, yellowish white, with a rich sub-acid flavor—January to June.

Tree, upright center, branching at almost right angles; wood, very hard; shoots, dark, smooth, with very white specks.

Mr. Peffer has many more seedling apple trees which are nearly equal to the Pewaukee, and which are withstanding the changeableness of the climate. But he is not engaged alone upon the apple in his experiments. Plums receive considerable attention, and the result is already before the public in two valuable seedlings. The Imperial Washington is from the seed of a Lombard apparently crossed by Imperial or Washington Gage, as it has the character of both to a great extent. Color, red, dark brown, with light yellowish specks; skin, thin and rather tender; flesh, greenish yellow, juicy and rich, quite firm and nearly free from the stem; fruit, large and nearly round, oblate, flattened at both ends, a slight suture stalk, about three-quarters of an inch long, rather stout, inserted in a small but sometimes no cavity, with occasionally a small ring ridge around it; season, middle to last of September. Tree hardy, vigorous and productive, nearly equal in every respect to the Lombard.

The Blue Tweens

is a small, dark blue plum with a whitish bloom. Tree, fifteen years old; raised from the seed; stands on a high ridge exposed to southwest, west and northwest winds; bears large crops of fruit every other year; is very hardy but grows slow. Fruit hangs in twos; flesh yellowish green, adheres to the stem on one side, and when fully ripe is of a sprightly sub-acid agreeable flavor; ripens from last of September to middle of October.

Much credit is due to Mr. Peffer for the energy and attention he has bestowed upon the cultivation of new fruits. If we had more of such men western pomology would "wag" on more prosperously.

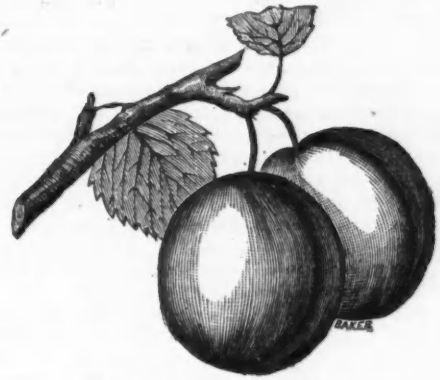
O. S. WILLEY.

Evergreens Irregularly in the Orchard.

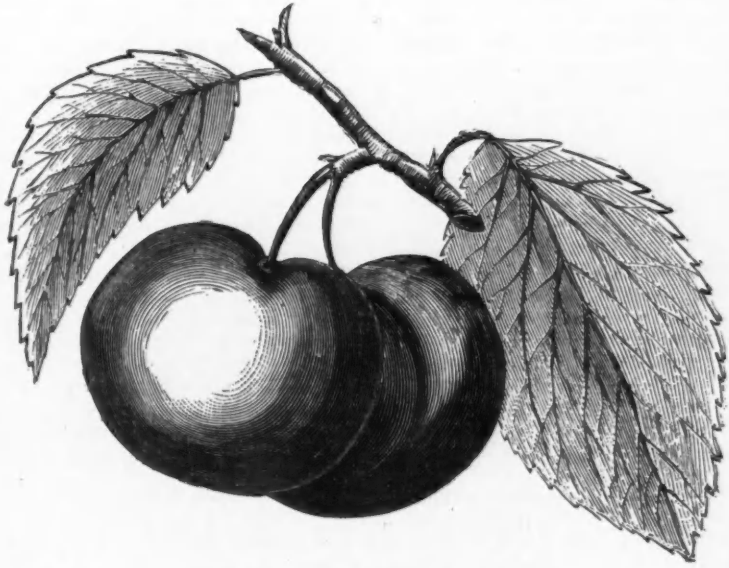
IT is many years since I wrote advising to all orchardists whose lands were in exposed bleak situations, and especially to the planter of orchards upon the prairies, that the most perfect protection, and the greatest security toward a permanent, healthy orchard, would be to plant here and there, irregularly and discriminately, among the apple, pear or other fruit trees, more or less of Norway Spruce, White Pine, Scotch Pine, and other evergreens. I have almost yearly repeated, line upon line thereupon, but not until in 1867, I think, was any special note made, or attention called to the point by the editors of horticultural journals. A few lines I then wrote in the Editor's Table of the HORTICULURIST went the rounds, and from that to the present I have been glad to see here and there a voice, or rather a pen, break out in favor of the plan—a plan that I have no doubt, if it could once be carried out, would result ten-fold more beneficially to the orchard than the stiff yet popular one of a belt or screen. It would really occupy no more of land than the belt or screen around, and as each tree has an influence over only a certain distance, the ameliorating influence of the evergreen would be evenly and regularly distributed all through the orchard, instead of a mere wind break, protecting only a breadth of say one hundred feet. I have repeatedly witnessed the beneficial influence of a contiguous evergreen in the bloom and fruiting of pears, apples and peaches, and I now write from having again witnessed the effect of their protective, soothing character in relation to a plot of dwarf pears.

It is useless to dilate or make words on this subject, for not a man who knows an evergreen has a doubt of their influence, beneficially, in toning down cold winds; the only point is to break our people from the idea that their orchards should be in methodical regular lines, and composed only of a certain class of trees. Once we can get them to see that Nature in her own works protects her tenderest plants, by placing contiguous some hardy grower as a screen; once we can get them to know that so far all their culture of fruit has been upon too artificial a system, following out for extensive orchards the lines of rule laid down by gardeners of town lots; once we can get them to believe that in profitable fruit growing, in order to be successful, it is as requisite to care for, watch, associate, feed and prune their trees, as it is to rear children and make them worthy citizens, we shall have more general and uniform profitable results, and less annual complaints of climate, frost, etc.

F. R. ELLIOTT.



Blue Tweens Plum.



Imperial Washington Plum.

Timber Culture—The White Ash.

BY W. W. TREDWAY, IN WESTERN FARMER.

AMONG our indigenous trees, the white ash is one of the most valuable; and considering its tenacity of life, the rapidity of its growth, its value as fuel, and its general usefulness in the construction of farming tools and implements, and, indeed, for all purposes where lightness, strength and elasticity are required, in connection with the fact that for it, no good substitute can be found for these purposes among our native trees, it appears reasonable that its cultivation may be made profitable, while the successful cultivator, besides making a safe and profitable investment of his money, would confer a great benefit upon the community. My object in penning this article for publication, is to draw attention to some facts within my own knowledge, and, if possible, to elicit other facts bearing upon this subject, from other persons who may have had a larger experience, and perhaps drawn more just conclusions.

In the spring of 1859, the writer planted several young forest trees, among which was a white ash about the thickness of an ordinary hoe handle. The roots had been cut to within six inches of the body, consequently it made but a poor growth the first season. It is now growing in front of my house, measuring twenty-five feet in height, and the first six feet of the trunk have an average diameter of more than ten inches, and has taken on about eight inches of wood in ten years. Excepting the poplar family, probably no tree has a more rapid or vigorous growth than the ash.

While the symmetrical form, dense, deep green foliage, rapid growth, and entire exemption from vermin, render the ash eminently desirable as a shade tree, its value for fuel contrasts favorably with most of our native forest trees. Taking hickory as the standard of excellence at 100, it is found that thrifty ash stands at 77, pin oak 71, beech 65, soft maple 54, white pine 42, and poplar 40. In addition to its usefulness in the manufacture of farming implements and in the construction of fine carriage work, it is quite extensively used in the manufacture of furniture. Good ash lumber commands sixty dollars per 1,000 feet at most points throughout the United States, with an increasing demand and a diminished supply. It will never go "out of fashion."

The ash of our Wisconsin forests is generally not of the best quality, being rather brash and porous; the result of a stunted, unthrifty growth. The oak predominates—is evidently the primitive inhabitant, and has overshadowed and thus dwarfed its younger and less powerful neighbor, who maintains an existence at a disadvantage, and, in fact, "lives at a poor, dying rate;" yet, when placed in favorable circumstances, the ash grows as rapidly and makes as good timber here as in any other country.

Assuming that, under favorable circumstances, the ash will attain a diameter of twenty inches or two feet, at thirty years old, will it pay to cultivate it? Planted eight feet asunder, about 650 trees will require an acre of ground, while a ten acre lot would hold fully six thousand five hundred. Is there any extraordinary credulity involved in the supposition that in the year of grace 1900, six thousand thrifty ash trees grown from seed of A. D. 1869 or '70, and standing on ten acres of ground any where in Southern Wisconsin, should be worth in cash sixty thousand dollars?

For the benefit of the reader I will give my experience in planting forest tree seeds. Although not flattering to the skill of the writer, the result may possibly prove instructive to the reader.

I once collected, by plucking from the trees, a quantity of ash and basswood seeds, and planted early in September. This was followed by two weeks of hot, dry weather, the seed having been slightly covered with earth. None of these seeds germinated, having rotted in the ground.

On one of the ash trees standing in cultivated ground, and from which much of the seed was gathered, there remained a good many, which fell after the first heavy frost. The next spring the ground about that tree was covered with young ash plants. The conclusion is obvious that my planting was done too early and too deeply. Dame Nature plants on the surface, and peremptorily vetoes any attempt to thwart her arrangements; nor will she sanction the germination of seeds in the autumn, which by her laws should be started in May. Forest tree seeds should in all cases be gathered and planted at the time they natu-

rally drop from the parent tree. Plant in rows two feet asunder, and six inches apart in the row, and cover slightly with straw to prevent their being blown away. No further covering is necessary, while even that may be dispensed with. The ash rejoices in a deep, rich clay loam, and it is scarcely necessary to suggest that no very good white ash timber has probably ever been found growing on very poor land.

Evergreens for Western Planters.

BY JAS. MATTHEWS, KNOXVILLE, IOWA.

THE following is a list of the principal kinds I have tried, and my observations as to their suitableness for Iowa, at least this portion of it:

Austrian Pine (*Pinus Austriaca*).—Perfectly hardy; rather difficult to transplant successfully, except when small—say from two to three feet high. This being a very distinct variety, one here and there in a pinery or arboretum, is quite durable.

Aleppo Pine (*Pinus Halapensis*).—Tender, of no account here.

Corsican Pine (*Pinus Larico*).—One of the handsomest pines I have seen. Had several trees, and all killed out in one or two years.

Mountain Pine (*Pinus Pumillo, or Montana*).—Perfectly hardy. It is a creeping shrub, with horizontal trailing branches, forming a dense mass of foliage, not generally being more than three feet high. I have specimens planted out about eight years, the tops of which have formed a diameter of about ten feet, and are quite attractive.

Scotch Pine (*Pinus Sylvestris*)—Perfectly hardy; rather coarse, and becomes more so as it approximates to a tree, and like the Austrian, is only transplanted readily when rather small, on account of scarcity of fibrous roots.

White Pine (*Pinus Strobus*).—This variety is entirely hardy; easily transplanted, if not too large, and one of our finest ornamental trees.

White Spruce (*Abies Alba*).—A slow grower, perfectly hardy, and forms a compact and handsome tree. Native of the northern portion of the United States and Canada.

Norway Spruce (*Abies Excelsa*).—This fine and hardy variety is too common and well known to need any description, being in almost every collection. In our rich soil and peculiar climate it is, as far as I have observed, not quite equal in its close symmetrical growth and its bright green foliage, to specimens in the East, or on thin clay soils.

Black Spruce (*Abies Nigra*).—Hardy and quite handsome, especially for the first ten years of its growth. After this it sometimes presents rather an open appearance for a popular tree. In a large collection, however, considering its extreme hardiness, and the ease with which it can be transplanted, it cannot well be dispensed with.

Hemlock Spruce (*Abies Canadensis*).—This is one of our hardiest and handsomest evergreens, and especially with an occasional pruning. By a proper use of the shears, it forms one of the handsomest pyramidal trees that I have any knowledge of. In fact no evergreen will submit to all kinds of training more gracefully than the hemlock. It is rather slow but compact grower. In respect to growth it will compare with the Balsam Fir, as about two to three. I have about twenty of these of different ages, from six to twelve years planted out, and from ten to seventeen feet in height, and I would not part with the largest of them for any tree on my premises, except one—that exception is the Blue Spruce of France (*Abies Coerulea*).

Balsam Fir (*Abies Balsamea*).—This well known and popular sort needs no encomium. Suffice to say, it is perfectly hardy, and easily transplanted, and a good grower.

Nordman's Fir (*Abies Nordmania*).—I have not yet tested this kind satisfactorily. It is recommended in the Eastern States as being quite hardy.

European or Common Silver Fir (*Abies Pectinata*).—This is a hardy variety, and a very handsome tree; is not so fine a grower as the Balsam Fir, but has fibrous roots; seems to transplant well, and is a very handsome and desirable tree.

Deodar Cedar (*Cedrus Deodara*).—A very beautiful tree, but will not stand our climate. I had several specimens which barely survived the second winter.

Cedar of Lebanon (*Cedrus Libani*).—This, where the climate is suitable, is one of the

most magnificent conifers known; but, unfortunately, it is too tender for Iowa. At least it will not do with me.

American Larch (*Larix Americana*).—This, although not an evergreen, is assigned a place among the coniferas. Although not quite so handsome as the European variety, is an acquisition in any good collection. Entirely hardy, and is easily transplanted, and grows quite rapidiy.

European Larch (*Larix Europea*).—This larch is too well known to need any minute description. It is a very rapid grower and a handsome tree, besides being one of the most durable for posts and other farming purposes. Quite as hardy as the American variety.

Common Juniper (*Junipurus Communis*).—Perfectly hardy, and a beautiful upright evergreen, from six to ten feet high, fibrous rooted, and bears transplanting well.

Swedish Juniper (*Juniperus Succica*).—This is also quite hardy, a slow and compact grower, and very durable.

Red Cedar (*Juniperus Virginania*).—A hardy and well known tree, with reddish wood, of great durability. By proper pruning it may be made to assume almost any desirable shape.

American Arbor Vitæ (*Thuja Occidentalis*).—This is the kind most common with us. Well known and hardy.

Siberian Arbor Vitæ (*Thuja Siberica*).—This is a slow and compact grower, with handsome foliage. The most durable and hardy kind.

Chinese Arbor Vitæ (*Biota Orientalis*).—Quite handsome, but with me too tender for our winters.

Golden Arbor Vitæ (*Thuja Aurea*).—One of the most beautiful of all the Arbor Vitæs, but, unfortunately, only half hardy. Out of some twenty plants I had, about half a dozen have survived four or five winters.

Lawson's Cypress (*Cupressus Lawsoniana*).—I have this variety of Cypress in a course of experiment. It is reported to be hardy, but needs further trial in the West. Should it prove as hardy as some claim for it, it will be a great acquisition.

Japan Cedar (*Cryptomeria Japonica*).—Another beautiful tree, which is too tender for the country north of St. Louis. I had a specimen that lived through one winter, but was killed outright the next.

English Yew (*Taxus Baccata*).—A fine, compact and upright evergreen shrub, of a dark glossy green, but will not survive one of our hard winters. There is also the *Taxus Rybernica*, or Irish Yew, which I find, upon trial, to be tender also.—*Contributed to Iowa Homestead.*

Geraniums.

BY SHIRLEY HIBBERD.

STOKE NEWINGTON, LONDON, N., *May* 3, 1870.

EDITOR HORTICULTURIST: May day has come and gone, and we shall remember it as one of the many cold May days this generation has enjoyed, or at all events endured. The teamsters garnished their whips with ribbons and their horses' heads with rosettes, as usual; the great person and parcel carrying companies sent out their omnibusses and carts newly painted; the chimney sweeps came forth with shovels and brooms; clowns, sprites and May queens carrying ladles to ladle up the largesse, and the heavens showered down sleet and rain, except at rare intervals, when the wind blew extra hard and people out of doors felt quite certain that it was dripping nuggets off their noses. As for people indoors, they crouched close to great coal fires and talked about the weather, and agreed pretty generally that a shivering May day is no novelty in Great Britain. There is a cheerful side to the story, for the country is exquisitely beautiful now; all the trees are in leaf except the oak, the mulberry and the locust. The horse chestnuts are as dense in leafage as they will be in June, but of a different color—a most confidential, hand-squeezing sort of tender green. Every separate tree looks as if it would presently sidle up to another and kiss it. And the fast uprising of the flower spikes helps out this idea; the trees are about to become bridal bouquets, and by the 10th they will be in full bloom. It would abundantly repay your traveling countrymen to make arrangements to see our Bushey Park during the whole of the month of May. We hear much about your forest trees and believe all we

hear. I hope you will believe me when I say that the horse chestnuts of Great Britain are not to be surpassed in their season by anything that can fairly compete with them in all the world. The tree is absolutely worthless in a commercial sense; when planted by the road-side it is a nuisance, for the boys pelt it with sticks and stones through all the daylight hours in the latter part of the summer, in order to obtain its fruit, and yet in the suburbs of all our towns it is the favorite tree, the tree of trees, the one that is first planted when grass lands are converted into gardens.

Geraniums.

There is something due from me this time on the subject of geraniums; or, to speak more correctly, Zonale pelargoniums. The subject is so vast that I know not where to begin, but I can make a comprehensive preface by remarking that I have had the good fortune both to see and take part in every one of the stages of improvement which the geranium has undergone in becoming a proper florist's flower. In my early days Tom Thumb was the leader and the type of highest perfection as a bedding plant. With it were associated Reidii, Punch, Kingsbury Pet, Rigby's Queen, Danby and Lady Plymouth, as the best typical varieties, and they all revolved around Tom Thumb like satellites around a planet. Donald Beaton, an able and most eccentric man then made a dash amongst them with an eye to color only, giving his attention chiefly to the nosegay or narrow-petalled race, and the result was a host of splendid bedding varieties, of which Stella, Cybister and Lord Palmerston may be named as having attained to highest popularity in this series. Beaton believed in the possibility of raising a yellow variety, and got so far towards it as to obtain Indian yellow, a curious orange-colored flower; and he also believed he might some day secure a blue, and his finest effort was in Amy Hogg, a lovely, soft, mouse color. When these two are placed side by side, the contrast is not only delightful, but instructive, for they mark the two extremes of divergence from typical color.

In 1857, I had the good fortune to obtain a double flowering kind, which I thought not good enough to bear a name, and so, having made note of the fact in the *Floral World*, I allowed it to pass into oblivion. But "Hibberd's Pet," a great advance on Reidii, I put into Messrs. Carter's hands, and that for a few years enjoyed high rank as a bedding geranium; the tri-colors and the doubles came before the floral public almost simultaneously. The French were the first raisers of double varieties, but the English are entitled to a monopoly of the fame that may belong to the origination of the tri-color leaved varieties. First amongst the breeders of this race we must put the name of Peter Grieve, the raiser of Mrs. Pollock and many another of the most famous of this famous race. While the tri-colors and doubles were still in their very first developments, the old, single flowered, zone leaved race were undergoing some marked improvements, and the first distinct and noble representative of these improvements was a variety named Dr. Lindley, one of a splendid batch raised by Mr. Bull, the most prominent characteristics of which were their large circular flowers and their great diversity and richness of coloring. The Stoke Newington collection have, to speak of them collectively, combined the two best qualities of the narrow and broad-petalled races, for they produce large circular flowers with immense breadth of petal on plants that are dwarf and compact in habit, and produce their flowers as freely as Tom Thumb, or Stella, or any of the old flimsy textured bedding race. As it is not desirable to say more of my own varieties than the story requires, I shall dismiss them by expressing my belief that Richard Headly, Thos. Moore, and Orange Nosegay, of our lot, are the three best in their classes hitherto produced, and we are inclined to back our Golden Banner against all other yellow leaved varieties for a leafage that cannot be surpassed.

Instead of making a long history or a tedious enumeration of varieties, I prefer just now to make a few remarks on the methods by which the several distinct strains have been secured. For the most part the first step has been made in every case by nature, and art has immediately followed it up. Breeding is, in every instance, a matter of selection, and when once we get what we call a new break, that is, a deviation in some new direction from a type, we have but to persevere, and we may reasonably hope to obtain a new race. The large circular flowers were obtained in the first instance on coarse growing plants, and I believe the best work I have done has been to combine the large flowers with the dwarf plants. If the results of thousands of experiments could be summed up in a word, it would be to this effect—that the male or pollen parent determines all the most distinctive characters of

the seedlings. The old rule, written down in all the books, that the mother plant should give the form and the father plant the color, has been abundantly confirmed as a sound rule, founded on the facts of nature in all the steps and stages by which the several distinct races of Zonale geraniums have been produced. But we must never expect to make rapid progress, and we must always take a hint from nature if she is disposed to give us one. Thus we had in Countess of Warwick and Attraction, hints of the splendid zone colors that would appear in Mrs. Pollock and United Italy, and that have attained to intenser glory in Sophia Dumaresque and Achievement. If you were to visit the sanctum of a tri-color breeder, you would find lots of common Zonales, selected solely for their large, round, fat leaves, with very bold black zones upon them. Experienced breeders prefer the most vigorous Zonales they can find. Mr. Grieve has many a time said to me, "I care not how coarse the plant is that I put a high colored variegate upon." These robust Zonales are selected to produce seeds for tri-colors, the tri-color element being conveyed into them by the pollen of tri-colors with which the flowers of the dark Zonales are fertilized. Many curious phenomena accompany the raising of these curious and beautiful plants. None can foretell, no matter how expert, what a seedling will become in a year or so from the seed leaf. But we can very soon see how far our operations have been successful as to the mere producing of variegated plants, for the variegation always appears in the seed leaves or cotyledons, if it is in the seed; that is to say, every seedling that rises with variegated seed leaves will in time be a variegated plant, though for six, twelve, or a hundred months it may be only a common looking Zonale. Sometimes the seedlings rise with cotyledons wholly white, with not even a streak of green upon them, in which case they soon perish. But deep yellow seed leaves are a sign that the plant will be a golden self or a bronze Zonale. The best tri-colors, whether of the silver or golden class, are usually ushered into the world with cotyledons streaked with green, white and yellow.

The raising of double varieties is a troublesome task, because of the difficulty of obtaining seed. But as to the mere raising of doubles, whether good or bad, it is not so difficult a task as many imagine. I hope I shall not be kicked by any of my geranium growing friends for letting loose a few secrets on the subject. The double flowers I had in 1857, told me all that might be done and would be done, but in spite of all that I never yet raised a double variety that I considered worth naming. It would have been better, too, if other raisers had been as exacting as myself; we should have been spared the cultivation of a lot of brutally coarse plants, many of which, as usual, are too nearly alike, and the whole race of doubles would have been in better blood. It is a great injury to floral art when bad blood is sent abroad under high credentials; just remember, as no doubt you will, what mischief was done to the fuchsia thirty years ago by the mistake of breeding from Fulgens. Just in the same way mischief is going on now by the practice of breeding from a lot of geraniums that are like cabbages, and that are bred from, because they have bad double flowers. But how are doubles bred? Both ways, by making doubles seed bearers, and also by taking pollen from them. But the best will be got from doubles as mothers, and singles as fathers, and I can tell you without having seen Lemoine's sanctum, that his best pollen plant for doubles has been Surpass Beauté du Suresne, which is, I will bet my head to a tin tack, the father of all his rose pink doubles, of which, by the way, he has presented us with rather too many. The very first year in which the doubles "came out" I starved a plant of Chanflour because of its execrable coarseness, and actually got fine seeds. Those seeds produced five plants too. Yes; and every plant was a coarse beast like the parent, and produced double flowers like it, and went, each in turn, to the same heap of rubbish, which said heap of rubbish had been duly consecrated to the service of the rejected, under the designation of the "Stamp-hole." A wiry man of mine so called it because he used to see me go there and stamp out of existence flowers of all kinds that had earned extinction by disappointing me. Doubles, as remarked above, may be bred both ways, for it is quite as common for them to produce a bit of vital pollen, as it is to bear seeds when fertilized from singles. But the rule I should give would be, according to the old florists—double mother, single father; the mother for form and habit, the father for color and carriage. Starvation improves the doubles in two ways—it reduces their coarseness and promotes their flowering; it also renders them more capable of giving and receiving pollen, and therefore is capital practice for the breeder.

Editorial Notes.

Pruning Blackberries.

Do not forget *now is the time*, while your new canes are growing, to *nip off* the top shoot at about 3½ or 4 feet high, and then all the side branches at 12 or 18 inches. The blackberry is such a rampant, straggling grower that unless restrained its fruit will be less in quantity and size, and not become well ripened. *Short plants* are also easier to work among, and, if tied to a stake or trellis, there will be no difficulty in cultivation.

We have no doubt close pruning will also add to the earliness of ripening, as well as increase the productiveness.

Excursions to the Pacific.

We anticipate a rich fund of horticultural information this fall from many of our returning excursionists to California.

An excursion party of large number, left Boston the second week in June, containing, among others, Pres. Wilder, P. Barry, Chas. Downing, W. S. Strong, E. S. Rand, jr., Alfred Bridgeman, and many others with their families; while an Editorial Excursion of the Agricultural Editors of the N. Y. Press is soon to follow, during July There is a rich field in California for our horticultural correspondents to explore, and we hope some will not fail to make good use of their time and take liberal notes for the benefit of the readers of The Horticulturist.

Curculio Traps.

The joy manifested at the sudden discovery, at St. Joseph, Michigan, that curculios could be caught by traps and little pieces of wood left under the tree over night, under which the insects would gather for shelter and from which they could be easily destroyed, seems to have met with a sudden check.

This was found to be true, while the weather continued cool, causing the curculio to descend from the trees at dark for shelter. As the mercury rose, however, the pests did not come down, and the consequence was that the jarring system of Dr. Hull, temporarily suspended, had to be resumed, or the loss of the fruit crop was inevitable. On the 22d of May, the weather was quite warm and its effect was manifest in the decrease of curculios under the traps when examined in the morning. One party, in three mornings, destroyed 609 curculios by the *jarring* process while the traps furnished but two. The traps are good when the nights are cool, but of little account during warm ones.

Portulaccas.

We hope our lady readers have not forgotten to put out a bed of Portulaccas. They need little culture, only to sow the seed thickly in a warm place, while the brilliant bloom and dark green glossy foliage will make them, in July, the delight of the flower garden.

Tobacco Soap.

This is an excellent article for destroying insects on roses, flowers and garden plants; dissolved in a strong solution with water and applied twice a week, it will keep them free from bugs, and often drive them away altogether after the first application.

Plant Mulberry Trees.

Wherever you have cherry trees or other fruit liable to be plucked by the birds, before you can secure any fruit for your own benefit, we suggest the plan of planting some for the birds also at a little distance from your choice fruit orchard. Mulberries are great favorites with the birds, and

wherever they are, in fruiting, they will leave the cherries and gather on the mulberry trees. We are glad to have a correspondent of The Farmers' Club touch upon this subject as well as he does.

"I would say to all farmers plant a few white mulberry trees for the birds, as well as for the chickens and the children. The trees are hardy, grow fast, and bear abundantly. I will give you my experience. During the *morus multicaulis* speculation, I planted a lot of them. They soon became worthless. I saved some white mulberries near the carriage-house and granary. About the same time I planted a cherry orchard, and a variety of plum trees. They all flourished finely, and soon had fruit in great abundance. The mulberries were ripe about the same time with the cherries, and continued ripening until late in the autumn. The birds were delighted with the white, sweet fruit, and left the cherries untouched. Chickens and children loved them. My beautiful grove of forest trees surrounding my house was vocal with the feathered songsters. I would not allow any gun to be discharged near the house or grove. The birds became very tame—sometimes sit on the banisters of my piazza and sing cheerily and merrily within a few feet of me. Their tameness was pleasant to see—none to make them afraid. In process of time my mulberry trees interfered with my buildings, and I was forced, reluctantly, to cut them away. Soon my cherries became knotty, wormy, imperfect, and but few on the trees. The cherry trees and many of the plums evinced signs of decay; large black balls or knots on the limbs of old and young trees. They are nearly all dead now, and very few birds to be found in the neighborhood. No cherries, no berries. This I believe to be the result of cutting away those splendid mulberries I never saw an apple tree borer in my 45-year-old apple orchard until just before I sold my farm, four years ago, and after the mulberries were destroyed."

Girdling Fruit Trees to Make them Bear.

We permitted the first article of Mr. Johnson on this subject, in The Horticulturist, to pass without any comment, in order to draw out observations from our observing contributors. It has been productive of general discussion and interest.

Just as we were preparing a few notes on the same point, we observed the "*theory and practice*" of girdling so well explained and condemned by a correspondent of the Boston Journal of Chemistry, that we allow him to speak in our place.

We only add, as our own opinion, *girdling fruit trees is always an injury*. Wherever the cultivator would check his trees and cause them to return to fruitfulness, *root pruning* below and limb pruning above are far more healthy and effectual.

"There is no doubt that the girdling of fruit trees is a cause of abundant fruitage, but it by no means follows from this fact that a general principle can be deduced, that trees would be improved, or the crop increased for a series of years, by such treatment. It is well known that gardeners frequently girdle a branch, by removing a narrow ring of bark around it, when they wish to increase the size and beauty of the fruit; but it is done at the expense of its vitality, and, unless the operation is skillfully performed, will invariably destroy it before the season of bearing the next year.

The crude sap, taken up from the soil by the roots of the tree, ascends principally through the vascular tissue of the alburnum or sap-wood to the leaves of the branches, and there both this and the carbon of the carbonic acid, absorbed from the air by the leaves, are organized into a proper substance for the growth of the wood and fruit. It then desends on the outside, principally through the sieve tissue of the cambium layer, forming a new layer of wood and bark; while a part also goes to the nourishment of the fruit. If there is no obstruction of the elaborated sap in its downward course, it is equally distributed to the branches, fruit, stem, and roots; but, if the bark and cambium layer are removed by girdling, it is stopped in its descent, and consequently received into the branches and fruit in excess, and they are thus increased at the expense of the part below. In this way we account for the increase of the fruit by girdling.

Professor John Lindley, when speaking of the subject in his late treatise on horticulture, quotes Mr. T. A. Knight approvingly, as follows: "When the course of the descending current is intercepted, that naturally stagnates, and accumulates above the decorticated space, whence it is repulsed and carried upward, to be expended in an increased production of blossoms and fruit." This theory is adopted by the best physiologists of the present time, and can be demonstrated with almost mathematical certainty. Therefore, this unnatural development of fruit, instead of indicating an improvement of the trees, must be looked upon as a premonitory symptom of disordered physical action, and of premature death.

If the bark and cambium layer have been removed by girdling, as seems to be the case with the trees, the downward circulatory connection on the outside between the upper and the lower part is destroyed, and the upper part at least must die. If, however, the cambium layer has not been destroyed, and has been so covered by wax and bandages as to prevent evaporation and drying of the surface of the decorticated part, there is a chance for some of them to live. It is true that some few cases are recorded of trees which have lived several years after the bark and cambium layer have been removed, but they are of very doubtful authority.

M. Ernest Faivre, a French physiologist, gives a statement of his recent investigations on this subject, published in the *Gardener's Chronicle*, about two months ago, in which he says: "In mul-

berry trees, as in all trees deprived of latex, annual incisions generally produce the following manifestations: 1. Formation of a swelling, or tissue restorer, at the upper lip of the wound. 2. Diametrical growth of the parts above the zone of bark taken off. 3. Hardening of the wood in that region. 4. Stationary condition of the parts below, if they are deprived of leaves and buds; or, if not, vigorous shoots from below the lower lip of the wound. 5. More easy, more early, and more abundant flowering and fruitfication. 6. Destruction after a variable time, of all the parts above the annulation."

From the foregoing observations it appears that girdling trees in any form is ruinous, and almost always fatal; therefore, I heartily concur in the advice given in the *Journal* that orchardists should not experiment on their trees too freely before they see what the final result will be with those already girdled."

Summer Pruning.

Now is the time friends before the 15th or 20th of this month, to prune and pinch back those limbs of superabundant luxuriance. Go through the orchard, nip off with your finger nails the top of any straggling sprouts, or clip them off altogether with the pruning knife. Many of our most experienced horticulturists, find the month of July quite as effective for pruning as in early and late winter. The theory for this is thus explained by the New England Farmer:

By the time that midsummer comes, most of the sap that flowed up in the spring, has gone to the branches and aided in expanding buds and blossoms, and in sending out new leaves and extending the twigs. When the tree has done this, the superabundant sap returns down the tree through the bark and increases its diameter.

The tree has now a season of rest. The sap vessels are comparatively empty, so that if its branches are cut, the wound will rarely bleed. The returning sap, we suppose, soon forms a green, healthy ring about the cut, in the bark, and the remainder of the cut dries and shrinks before the sap is again in motion. This season of rest, then, of three or more weeks, is the best time to prune.

All fruit trees growing as common standards, should be allowed to assume their natural form, the pruner going no further than to take out all weak and crowded branches.

Some persons go into the centre of a tree and cut away quite large limbs, when the desired object could be much better gained by thinning out their extremities. It is always better not to cut a large branch, unless it is actually endangering the tree considerably. Taking off large limbs tends to throwing out suckers the following summer. All these should be rubbed off when they first appear.

When pruning,—Mr. Downing says,—is not required to renovate the vigor of an enfeebled tree, or to regulate its shape, it may be considered worse than useless. Bearing in mind that growth is always corresponding to the action of the leaves and branches, if these are in due proportion, and in perfect health, the knife will always be found rather detrimental than beneficial.

But the injury arising from pruning apple trees, is infinitely greater from doing work at the *wrong time of the year*, than from injudicious cutting. Our object is now, mainly, to present some authorities on this point.

Prof. Lindley says: "If well directed, pruning is one of the most useful, and, if ill-directed, it is one of the most mischievous operations that can take place upon a plant. The season for pruning is usually midwinter, or at *midsummer*. It is, however, the practice to perform what is called the winter pruning *early in the autumn*."

Mr. Downing. "We should especially avoid pruning at that period in spring when the buds are swelling, and the sap is in full flow, as the loss of sap by bleeding is very injurious to most trees, and in some, brings on a serious and incurable canker in the limbs. * * * Our experience has led us to believe that, practically, *a fortnight before midsummer is by far the best season, on the whole, for pruning in the Northern and Middle States*. Wounds made at this season heal over freely and rapidly."

"The best time for a general pruning is at the close of the first growth of summer, 15th of June to 15th of July."—*Am. Agriculturist*.

"In the spring, the tree in all its parts, is filled with sap, and the wood at the wound cannot season. Hence it readily decays. Any person who should cut timber at this season, and expect it would season with the bark on, would be considered out of his senses."—*M. B. Sears in Maine Farmer*.

"*June* is the time to prune fruit trees. Limbs taken off at this season, will begin immediately to send out a ring of new wood, just where it is needed, and will thereby protect itself in the soonest possible period from external harm." So states E. D. Wight, in the *Genesee Farmer*.

Exposure for Pears.

A CORRESPONDENT of the *Carolina Farmer* says that he would not be careful to select for a peach orchard a northern, southern, eastern, or western exposure in particular, but would prefer to plant, if possible, on opposite ground at the same time. For example: one of his neighbors owned a high hill which sloped north and south. He had a peach orchard on both sides of the hill. He has seen the orchard on the north side burdened with fruit, while on the south side the frost had completely destroyed the crop—and *vice versa*. The same may be seen on eastern or western exposures.

Soil for Pears.

A CORRESPONDENT of the *New England Farmer* says that if pears are planted on sandy or gravelly soil, they will cost more for manure than they are worth, and many kinds will fail to grow—that is, if the land is dry. On such land he has had some success with Flemish Beauty, Bartlett, Louise Bonne de Jersey, and Beurre Giffard, but he does not think his success would satisfy a market gardener.

Thinning Fruit.

AT this season of the year, when many fruit trees are loaded with more fruit than they can possibly ripen well, we call attention to the following hints from M. P. Wilder, which appeared some time since in the *Journal of Horticulture*. They are the most useful hints we have ever seen on the subject:

It is true that the labor is great, but so is the profit; and oftentimes it happens that the labor of thinning the crop makes all the difference between absolute unsaleableness and a high price in the market. Not unfrequently a pear tree will set so much fruit that it will not bring any part of it to a size which will render it saleable in a crowded market, when if one-half, or even a large part of the fruit had been removed, the remaining specimens would not only have filled nearly or quite as great a bulk, but would have sold quickly at the top prices of the market. One of our farmers, near Boston, always thins his fruit; another, adjoining his orchard, neglects it. The location and treatment of these two orchards in other respects are much the same; but the former realizes from his crop of Baldwin apples about four dollars and a half per barrel, while the latter, standing by his side in the market, receives less than three dollars and a half for his.

The case is still stronger with the pear, which, growing on smaller trees, is more easily thinned, and the prices obtained for the fruit afford a better remuneration for the labor of thinning. While those properly thinned and cared for will command four dollars per bushel, those of the common will not bring more than two dollars; and this rule applies not only for fruits, but to all vegetable productions. Every one has observed that the overbearing of a fruit tree one year, is likely to result in barreness the next. Hence the necessity of thinning our fruits so as to avoid exhaustion of the fruit tree, and to keep up a regular succession of good fruit. Even the Baldwin apple, which from its great productiveness bears only on alternate years, we think might, by thinning, be made to bear annual crops.

When fruits are crowded, they are not only deprived of light, air and warmth, but actually of room, so that the adjacent sides of two fruits are compressed, and they fail of their full development. Not merely the form but the color is improved by thinning; for without light fruit can never attain perfect color. When fruits are crowded in clusters they are particularly liable to be attacked by insects and disease; and therefore the necessity, if we wish perfect specimens, for removing a part, so that no two fruits shall touch each other.

The *Germantown Telegraph* also adds a few comments:

Thin out pears where they overbear, removing every knotty and wormy specimen. There are some varieties that grow in clusters, and do not generally overbear—from these the wormy or worthless ones only should be removed; but where the trees are not too large to manage, and are not cluster-growing, no two specimens should be allowed to touch, as they are almost certain to become wormy, and both are lost. Many persons not well acquainted with fruit-raising, hesitate to thin out their trees on the ground that the crop will be diminished. This may be possibly but not positively true if the fruit is intended to be fed to the pigs. But even should it be otherwise true sometimes, who would not prefer to have one bushel of large, beautiful, luscious pears, to five bushels with probably not a half a peck among the whole fit to put upon your table or send to market?

Pruning the Raspberry.

FROM a prize essay on small fruit culture, by W. Saunders, London, Canada, we clip the following paragraph:

Pruning.—Canes which have once borne fruit, bear no more. Hence, these should be removed as soon as the fruiting season is over, cut off close to the ground, so that the young canes may have more room and air. At the same time due regard must be paid to the thinning out of the new canes, removing all that promise to be weakly or slender. Since we depend on the strength of the current year's growth of wood for our next year's crop, any process which will conserve the vigor and concentrate the energies of the young plant is deserving of regard. Summer pruning and pinching we deem a valuable means to this end. The young plant, when it has attained about the height of three feet, should be pinched off at the tip; this will cause the side branches to develop, which in turn should be subject to similar treatment when from six to eight inches long. This pinching should be repeated if necessary, but should not be continued too late in the fall, since it would cause a late growth of tender wood which would suffer during winter. It might be practiced safely enough till about the beginning of September, and any subsequent growth not wanted might be removed by a light spring pruning. This method we regard as much less wasteful than that of allowing the summer's growth to proceed unchecked throughout the season, and then prune back in the spring to a

proper height. By this latter method the plant is allowed to waste its strength in the unnecessary production of wood which must be removed, and the growth is often long and slender; while in the former case all its energies are concentrated in the development of a stocky, well-ripened cane, far better fitted to bear its destined weight of fruit the ensuing season. This treatment is equally applicable to the Black Caps, unless where it is desirable to raise new plants; then the natural extension of the cane, or portions of it, must be allowed.

The Flower Garden.

THE new, handy little volume entitled "*A Simple Flower Garden*," published by Loring, of Boston, contains some excellent hints, very appropriate to the season:

Weeding—Is the horticultural terror that deters many people from having a garden. Weeds always will come up, and the richer the soil the more readily they do so. Yet, if properly managed, they present no serious obstacle to success. The true method of treating them is to destroy them when very young, not over one-half inch high. They never need be pulled up by hand, except from those few spots where the hoe cannot reach them. The hoe used is known as a long handled shuffle hoe, and is pushed about over the surface, cutting off and destroying the young weeds. If they are thus taken in hand early, before they acquire a firm hold in the ground, the trouble of removing is very slight. Choose a bright, sunny morning, when the wind and sun will wilt the tiny plants thrown out by the hoe As soon as they appear again, repeat the dose.

The iron rake will here come in play to remove the marks of the hoe and any lingering weed not killed by the sun. No weeds must be suffered to remain on the ground over night, because, if not utterly dead, the cool air and dew may revive them, and they will start again into new life and trouble. The surface of the garden is much improved by this hoeing and raking, and, if possible, it should be done after every rain, or at least once a week. One hour will be sufficient to enable one to go over both borders.

Insects.—These appear in June, and, if allowed to have full freedom, will do great harm. The best friends a grower can have are the birds. If treated kindly, and made to feel at home in the garden, they will do more to remove troublesome insects than any other one thing, except toads. Toads should be treated with respect and kindness. If there are none in the garden, hire a boy to procure a dozen, and give them free range over the grass and borders. They destroy great quantities of vermin, and must, therefore have all the consideration due to floricultural benefactors.

The lady-bird, a small and well-known insect, also seems to keep down destructive creatures of its own kind. Plaster or wood ashes, sprinkled over the leaves of young plants, if applied early in the morning, will keep away several kinds of destructive bugs. The following mixture, if showered with a syringe over rose bushes or other plants infested by the rose slug, will be found useful. It can be procured from any chemist, and when once prepared will last a long time. Sol. Sulphuret of lime; quicklime, one pound; sulphur (flowers), two pounds; water, ten pounds. Boil for an hour; cool and decant the clear solution. Mix a half pint in four gallons of water, and use freely.

Thinning Seedlings.—This is something that must be attended to, if good plants are desired. On the spot where the seeds were sown a mat of green plants will appear, and probably growing too thickly together for health and comfort. Having determined, from the height and habit of the plant, how many can stand there, pull up and destroy the rest, beginning at the weakest, so that those left for growth shall be the finest and strongest.

Pinching.—Our common garden plants grow and increase in size, by what is called "the extension of the growing point." That is, they push out the tip ends of their shoots and elongate them in that one direction. When a plant is in vigorous growth, it will not only extend its shoots in one direction, but in several. From the sides of a shoot other points start out. These in turn repeat themselves, and in this way the plant becomes filled with growing ends or shoots. As the flowers are always borne upon the ends of the shoots, it is plain that the more the shoots, the more flowers.

If by any means the number of shoots is still farther increased, the gain in flowers will correspond. This is easily done by pinching between the thumb and finger the soft and tender tip of the shoot. The plant, disappointed in that direction, at once puts forth two or more shoots just below the injured one, and growth goes on in two new directions, instead of one. The advantage to the grower is plain. So long, however, as the pinching is carried on, no flowers will appear. Therefore, when it is desired that the plant should put forth buds, the pinching must cease. A plant pinched in June will flower in July. If pinched through July, the flower will come in August, and in greatly increased quantities.

Pinching House Plants.—This is carried on all summer. Those carnations, bouvardias, salvia, and other plants to be used in the house during the coming winter are not allowed to bloom at all, but are pinched as often as the shoots become a few inches long. This will occur about twice a month through the entire season. The effect of this is to produce thick, compact plants, filled with hundreds of short shoots, every one of which will bear a bud, and return to the careful grower an overflowing harvest of blooming flowers.

The Josephine de Malines Pear.

We notice that this pear is favorably spoken of by several growers, as one of the best winter pears, and from the fact that it was introduced and indorsed by the Hon. Marshall P. Wilder, of Massachusetts, there can be no doubt of its excellence. We think it was in the month of February, more than two years ago, that Col. Wilder sent us specimens of a number of varieties of pears in a good state of preservation, and among the number was the Josephine, which from its size and general appearance attracted our special attention; and when it was tested we found it to be the best of the collection, so far as quality and condition were concerned.— Since that time there have been so many good things said of it, in addition to its endorsement by Col. Wilder, which of itself would have been authority enough, that we should suppose that it would be found upon every plantation and in every garden.—*Germantown Telegraph.*

A Handsome Willow.

Among the willow family none is more beautiful than the Laurel leaved, *Salix laurifolia.* It is a strong grower, with large, deep, rich, glossy green leaves, that attract the eye even at a considerable distance. It should be clipped each year in spring, and made to grow in a bush or round low tree form, when, if on the lawn, or in a small front ground, its appearance is among the most ornamental small trees. —*Journal of Agriculture.*

Summer Pruning Dwarf Pears.

With most of dwarf pear trees the present is the time for summer pinching our pruning as it may be termed. The shoots of this year's growth are now from eight to twelve inches long, and now the labor of shaping a tree is less than half of that of winter pruning. With the thumb and finger pinch out the end of the shoot and one partially grown leaf; at the same time study to have the leaf or bud just below where you pinch, and what after pinching will be the last or terminal bud or shoot, on the side towards which you wish the next leading shoot or branch to grow. Our rule is to almost uniformly have this bud on the outside, and thus make our trees wide-spread and bushy, examples of which are in our grounds, open freely to the inspection of all who wish to learn our way. The short, slender, or inside spur shoots should not be touched; pinch only the leading strong shoots, or what are to be the leading branches.—*Journal of Agriculture.*

Dust the Rose Bushes.

We have often conquered the green slug or rose-leaf eater, by dusting the bush freely with plaster of Paris early in the morning before sunrise, when the insect is freely at work and when the foliage is wet with dew to mingle and hold and spread the plaster. It is possible fine wood ashes or powdered lime would answer just as well. Regular practitioners use flour of sulphur.—*Journal of Agriculture.*

Verbenas.

If you want your Verbenas to grow freely and bloom abundantly, pinch off all the first show of blossoms and so continue to do until the plant has become strong and vigorous.—*Journal of Agriculture.*

Carbolic Soap for Insects.

I am experimenting with Buchan's Carbolic Soap, as a preventive for injurious insects, and I am so well pleased with the results so far that I wish to stimulate other horticulturists to try some experiments with the article.

For cut worms, I made the soap suds pretty strong—two gallons of water to half a pound of soap, and with it saturated a bushel of sawdust; then placed a little around the stem of each cabbage and tomato plant—using a handful to eight or ten plants—adding a little more after two or three days when the odor seemed gone. This was completely successful in ground where the worms were quite plenty, and where plants not protected were speedily cut off by them. It is the cheapest and most easily applied remedy that I have yet seen.

For striped bugs on melons and cucumber vines, I find the same method of using the soap quite effective, if the sawdust is sprinkled on the plants every day—which is very little trouble—but I am now trying wetting the plants directly with weak suds, made of ten gallons of water to half a pound of the soap, and I think this will prove the best.

For Aphis or Plant Lice on cherry trees and the like, a sprinkling or two with the suds, by means of a sponge, or bending the shoots so as to dip them into a pail or basin, is speedy death to the bugs. Care must be used not to have the suds too strong when applied to tender plants or young shoots of trees; experiments are needed for this point.—*M. B. Batchan in Ohio Farmer.*

Dahlias.

The Dahlia is only second to the rose as a universal favorite for rural gardens. The great diversity and beauty of its blooms, and their extraordinary profusion in the autumn months, when many

other fine flowers are gone, make it worthy of all cost and good culture. When first discovered in Mexico, in the year 1789, growing three thousand feet above the level of the ocean, it was only a single red flower, but as it bloomed in the autumn it soon became a favorite. By good culture, and saving the best seeds and sowing them, full double blooms were produced. There have been hundreds of thousands of choice varieties so produced; so that they are now just what our most sanguine wish could crave. Certainly there is no plant so profuse and beautiful of bloom as the dahlia—almost of every color and fine variegations, and which come just at a time when they are most desired. Some varieties are five and six feet tall.

A new class has been originated of late years called the Bouquets; they grow only two feet tall, with hundreds of double roses of all colors and variegations of colors, except *blue*. The very choice varieties annually shown at our Pennsylvania Horticultural Exhibition every autumn, far surpass in beauty the power of language to describe.

June is the best month to plant dahlias; plants in flower-pots, raised from cuttings, bloom more more profusely than old roots do. They can be purchased for five dollars per dozen, and some seven dollars; others three dollars per dozen. They grow upon almost every kind of soil, both in bright sunshine and in partial shade, and yield their constant profusion of blooms for three years in succession. When their tops are injured by the frost, their roots are dug up and kept in boxes with dry soil or sand over them, and placed in a cellar.—*Practical Farmer.*

Culture of the Strawberry.

One of the most vexatious things that meets the amateur cultivator at the outset is the vast amount of opinions, often widely at variance, recommended for the culture of this fruit. A few years ago the great point consisted in planting a certain amount of both staminate and pistillate varieties in the same patch; they would then pollenize and each produce a perfect crop. In those days the hermaphrodites were considered of small account, and, according to some authorities, would not produce half a crop as compared with pistillates; but the Wilson, with its annual crop of two to four hundred bushels per acre, put a quietus on this doctrine.

Then again as to mulching—how many theories have we had? Tan-bark was for a time the one thing needful, then straw was the great pabulum; indeed it was nothing but strawberries in another form, some asserting that the berry derived its name from the astonishing effects of an accidental mulching at some time during the early stage of its culture. Sawdust and new-mown hay also had their advocates. With regard to the amount and kind of *terra-culture* necessary, there is still much diversity of practice as well as opinion; and after a trial of several I am satisfied that for a small patch the following is perhaps best. First prepare the land perfectly, that is have it fine, sufficiently rich, (there need be no fear of having it too rich,) and clear off all weeds and their seeds as much as possible; this should be done as early in spring as possible. Some growers claim that the fall is the best time for setting; it may be in some localities, but such is not my experience, as when set in the fall they are very liable to winter-kill. Stretch a line and set with a dibble, spreading out the roots as much as possible; set them a foot apart in the row and rows two feet apart. I am fully convinced that the best and easiest way to produce cheap berries is by adopting the row system instead of hills, although you can perhaps raise larger berries in hills; still the Wilson will bear large crops even where the plants are so close that not a particle of ground can be seen. If the ground has been properly prepared it will require but one or two hoeings to keep clean until the runners begin to spread rapidly (toward the last of June), after which no more labor is required during the season, except an occasional going over and pulling what weeds make their appearance. If set early they will bear sufficiently the first season to pay all expenses. Some advocate covering during the winter; I never covered mine and they are never injured by the frost. If covered, something, as a few pieces of rails, should be laid among them to raise the covering (which may be of straw, cornstalks or any coarse herbage), an inch or two to prevent smothering. In the spring spade up a foot wide and leave two feet; this makes a place to walk in to pick the berries and furnishes air and light to the plants; the next year spade up another foot, thus renewing the bed every three years. After each spading rake the bed all over with the steel-toothed garden rake, removing all dead vines, &c., and if any weeds appear during the season they should be pulled or cut off just at the top of the strawberry vines. Where grown on this system the ground is so shaded by the vines that they will stand dry weather much better than in hills. One great advantage is saving of labor; another that the fruit is always clean even after the hardest showers, and how much easier than to be continually cutting runners, hoeing and hand-weeding among the hills.

Of all varieties the Wilson is perhaps the best for all localities and soils, yielding well in any locality; a little too tart, perhaps, but, like the Lawton blackberry, this is removed if allowed to thoroughly ripen.—*O. Burras in Germantown Telegraph.*

The Cranberry as an Ornamental House Plant.

The common cranberry of our swamps is a very attractive plant when cultivated in pots. The plants are evergreen, and will grow in any ordinary living room without extra care, and the fruit will

remain on the plants until the flowers appear for the next crop. We would advise our lady readers who are at this time looking about for choice window-plants to try a few pots of cranberries; and, unless we are greatly mistaken, they will thank us for this suggestion. There are scores of small but beautiful native plants that are well worthy of a place in our conservatories; but the idea that only rare things are valuable for such a purpose is far too prevalent among the people.—*Hearth and Home.*

SHORT grass from the lawn, says a correspondent of the *English Journal of Horticulture*, is the best material with which to cover small seeds. Spread it on about half an inch in depth and then water. This acts as a light mulch, and as the grass soon shrivels the plants come up through it without difficulty. The birds never molest them, and their growth is assured.

Whale-oil Soap.

THE best remedy, in our judgment, for slug pests on currants and roses, is the application of a solution of whale-oil soap (as we have often before suggested), in the proportion of one pound to five gallons of water, sprinkled over the leaves from a watering-pot with a fine hose. It is certain death to all it touches.—*Germantown Telegraph.*

Quince Growing.

AN Ohio quince grower has been very successful for two years past with this fruit. His treatment of the tree is very simple. He spades the ground of his orchard every spring, and scatters a peck of coal-ashes around each tree. He finds salt the best manure for the quince, and applies about one quart to the ground under each tree after the soil has been spaded, and another quart when the quinces are about half grown. Last year he sold three hundred bushels of quinces from his orchard of three-fourths of an acre.

Lime on Green Sward.

A WRITER in the Journal of the Royal Agricultural Society, describing the permanence of the action of lime, says that he knows a piece of ground containing 166 acres, which formerly grew nothing but heath. A good dressing of lime was applied on the surface of the sward which has nearly doubled its value. This was done several years ago and totally eradicated the heath. The lime to this day appears in full action, as its effects usually testify, from the richness and sweetness of the herbage, the texture of which has been entirely changed by the application of lime.

To Destroy Red Spiders on Fuchsias.

A PHILADELPHIA correspondent of the American Agriculturist says: "Fill a barrel nearly full of water and slake in it about a quarter of a peck of lime, and let it stand until perfectly clear. Hold the plants effected in the water (bottom up) for about five or ten minutes, then wash them with pure water."

Pear Culture—Root Pruning.

IN an essay on pear culture read before the Alton Horticultural Society, by H. J. Hyde, occurs the following: "As to root pruning to control blight, I am a believer in its efficacy not from theory alone, but from practice the last four years. I think pear trees are as tenacious of life as most fruit trees. I see it every year on my place. It may be others have noticed it, that trees attacked with blight, that are not killed the same season, will put forth the following year with even more vigor sometimes than if the tops were not reduced by the blight; by a proper system of root pruning we can control the blight; and why? Simply if our trees are thrifty they grow all summer, and when attacked the sap is active and the disease spreads like fire: but if root pruned they form their terminal bud early, the tree is repairing root growth, the sap is not active, and cannot and does not extend enough to do any serious damage. It seems to me that, from time to time, there have been arguments enough made and assertions from different parties, to at least warrant a thorough trial of this system; but there are those whom we might argue with for years, who would not be convinced; still, if they would try the remedy, they would either help to establish the fact or give themselves a good argument against it, and could claim with some sense that the mere theory of root pruning is a humbug. What is wanted are the facts; you who have pear trees try this, and know yourself, whether or not it is a failure."

New Rose—Louis Van Houtte.

"D." OF Deal, in *The Cottage Gardener*, says that this bids fair to be the rose of the season. M. Lacharme is the raiser. M. Guillot exhibited a rose at the Lyons Horticultural Exhibiton, to which the first prize was awarded, but on learning that M. Lacharme had raised a rose of exactly the same color, he compared it with his own, and finding it to be superior to his, he suppressed his own seedling, and sent out in its stead that of M. Lacharme; and this is the rose Louis Van Houtte.

Care of Newly Planted Trees.

At no time in the life of the tree does it need more care than the first season after it is transferred to the orchard. Removed from a sheltered position to one too often exposed on every side, taken from the rich soil and hot-house culture of the nursery and placed in the common soil of the orchard, it needs at least common care to aid it in accommodating itself to its changed circumstances. Unless this is given, some will die and others will be injured in their vitality, and live along a few years and then die. Much of the deformed and imperfect growth of black heart, and diseased wood, undoubtedly has its origin in injury accruing from neglect or mismanagement in their early growth; but the losses and failures coming from these are cited as conclusive proof that the soil or climate is not adapted to raising fruit, or that this particular variety is not sufficiently hardy, instead of being attributed to their true cause.

The trees should be well mulched, or the soil stirred frequently around the body of the tree and kept light and porous throughout the season. Mulching is much preferable, as it keeps the soil at a uniform temperature and moisture. For this purpose old hay, coarse manure or leaves, with a little earth on top to keep them from blowing away, may be used. The hot days of July, August and September, are usually the most trying on young trees, as the hot dry winds and the direct rays of the sun are continually drawing out the moisture from the bark, leaves and twigs of the tree; and in times of drought, or where the trees are unmulched and the same agencies have exhausted the humidity of the soil, the tree fails to receive sufficient moisture from the roots to supply this draught upon it, and also maintain a perfect and hardy growth; consequently the tree dries up, or at least makes but a feeble growth of unripe, tender wood.

In very dry seasons, to get sufficient moisture, in addition to the mulch, it may be necessary to water by hand. If the bark has become dry and withered, some benefit will be derived from washing, or sprinkling the tree each evening with water or weak soapsuds.

Trees suffer more in this usually dry climate from lack of moisture where the ground is seeded down, and this is the reason why we recommend cultivation of the orchard, especially when young. By mulching under the trees and tilling between the rows, a much more vigorous and hardy growth will be secured, which we think will add materially to the fruitfulness and longevity of our orchards. —*Western Farmer.*

Picking and Marketing Fruit.

Nothing adds so much to the profits of fruit culture as a good system of picking and marketing. Often a single shipment of strawberries will vary from $40 to $100 in price, according to the neatness of the appearance of the fruit, its quality, and its condition.

Josiah Hoopes, in the Delaware *Republican*, in a series of articles on fruit culture, gives many judicious hints on this important subject. He gives directions how to raise seedling fruit trees, and how to propagate vines and plants by cuttings—points of more interest to the nurseryman than the farmer. In regard to the gathering of ripe fruits of different kinds, he says that no fruit should be taken from the tree or plant during a damp time, and especially when the dew is plentiful in early morning. Never be so hurried as to find cause for the excuse, I had no time to hand-pick my fruit, and, consequently, was forced to shake them off; for such is very poor policy. Fruit so gathered will almost inevitably decay from the effects of bruises. Each specimen should be taken from the tree one by one, handled as if they had been so many eggs. The slightest bruise or even abrasion of the skin is the sure forerunner of a dark spot, which will eventually change into some form of rot. The spores of seed of *fungi* are always ready to assist in the work of dissolution, and the slightest scratch gives them a foothold for their destructive work. Scarcely any variety of the largest fruits color and ripen so well if left to perfect themselves on the tree, and especially is this true in respect to pears. Summer varieties, as they approach maturity, loosen their hold somewhat on the limb, and by gently raising the fruit they will easily detach themselves at the proper period. This is an excellent test, and may always be relied on. To color up fruit nicely, all that is necessary will be to spread a blanket on the floor of a cool room, and then thinly and evenly place the fruit on the floor. A second blanket must be spread over them, and in a short time the effect of this treatment will be apparent in the most golden-colored Bartletts and rich, ruddy-looking Seckels imaginable. Pears perfected in this manner rarely have the mealiness of their naturally-ripened companions; nor do they prematurely decay at the core as when left on the tree. Peaches are too frequently gathered before attaining full size, and when this is the case we need not expect good flavor. They must obtain this requisite before gathering; although it is not necessary to delay picking until very mellow. As a general rule, all small fruits are gathered too early; and, as high color is not a sign of maturity, many experienced fruit-growers are frequently misled. Never pick strawberries because they are red, nor blackberries solely on account of their dark appearance. Each should remain on the plant for some time thereafter. The Albany seedling strawberry changes to a deep crimson hue and gains continually in size after its first coloring process. It is then soft and excellent eating. And so with blackberries in like manner, many complaining of their extreme tartness when the fault was in gathering imperfect fruit. The Lawton or New Rochelle variety, in particular, is delicious eating, if allowed to remain on the plant until soft, when the slightest touch will sever its hold. Strawberries

picked with the calyx (or hull) adhering will always carry better and be less liable to decay than if carelessly pulled off without this appendage. And so with cherries, also, as the cavities made by parting with their stems are liable to engender speedy decay. Neither do they present so fine appearance on the table or in fruit-baskets of our market gardeners as when temptingly displayed each with its stem attached. The foregoing remarks in relation to the proper time for gathering fruits are equally applicable to the grape. These generally color long before they are mature; and thus many a novice in fruit culture frequently forms an unjust opinion of his varieties simply from testing unripe specimens. Grapes should always be severed from the vine with strong scissors or trimming-shears, and never twisted or broken off.

A New Evergreen.

THE erect green Samson Cypress, is a new variety, which is very much prized in England. The *Gardener's Chronicle* says the original was sent from California. "The parent plant is about nine feet high, and three feet through its widest part. The growth is strictly erect, and so close and dense as to form a solid mass of branchlets, which are flattened, and set in a direction radiating with a remarkable regularity from the centre axis of the plant, the wood being perfectly clothed, and the branchlets green to the very centre. This tree has never been protected in the slightest degree. In the symmetrical outline of the tree itself, in the regularly radiating vertical ramifications, in the slender, graceful character of the everywhere erect spray, there is about this plant an air of refinement rarely met with, and which, combined with its bright and enduring verdure, stamps it as a gem of ths first order amongst hardy evergreens."

The Oak in Landscape Gardening.

A CORRESPONDENT of an English agricultural periodical says that the different varieties of the oak may be used with very good effect in landscape gardening, their different shapes and the various tints made by their fading foliage in the Fall forming beautiful contrasts. An aged oak in the grounds of a modern villa at once asserts that it is of greater antiquity than the surrounding objects. In Britain the aged oak is quite in character in the grounds of a castle, a palace, or a baronial hall. In the midst of an oak forest, Milton would have placed such buildings—

> "Towers and battlements he sees
> Embosomed high in tufted trees."

Cottages are as ancient as castles, historically speaking; and they also harmonize with aged trees. Milton in describing a scene of rural peace and comfort, says:

> "Hard by a cottage chimney smoke
> From between two aged oaks."

The oak tree is a favorite with landscape gardeners. Some forest trees, ere they can become profitable as timber, require to be trained and pruned, or drawn up by nurses so as to possess straight and clean stems, which, in the eye of the carpenter, are the chief marks of excellence in trees. The oak, on the contrary, is most valuable when its stem is crooked, and its principal branches are twisted in such a manner as to form proper bends for ship building. Thus the same oak that seems beautiful in the eye of a landscape painter, will be a desirable tree, if sound and healthy, in the estimation of the ship-carpenter. Proprietors may plead their desire for quick growth and straight stems, when they refuse to thin out their groves of larches and firs, but those who crowd oaks together, and refuse them room to spread out their equally noble and useful branches, are without the least shadow of an excuse.—*Western Rural.*

Destroying Worms in Lawns.

MANY of the grass plats in city gardens, as well as the lawns at our suburban residences, are injured by various species of earth worms, which it would be well to destroy. It is said, by a good English authority, that the following is an effectual remedy for these pests: Take a barrel of water, and into this put about ten pounds of slaked lime, and after stirring it for a few moments allow it to settle; then pour off the clear liquid and apply it to the grass with a watering-pot, or other similar implement. It would be well to roll the lawn the day previous to applying the lime-water, as this operation will fill all the holes that the worms have deserted, and they will make new ones the following night. The best time to perform this operation is in rainy weather, as the worms are then near the surface.—*Western Rural.*

Willows.

ON bleak prairies and other exposed aspects, where shelter and shade are much needed, willows will be found very suitable for furnishing these important advantages. The genus *Salix*, or willow, comprises a great number of varieties, many of which are valuable for their timber; some of them make very ornamental trees, and some furnish osiers for baskets and ornamental willow work.

For ornamental trees in parks or pleasure grounds, the varieties which produce the best effect and

make the greatest contrast in the habits of their growth, color of bark, etc., are the weeping willow (*Salix Babylonica*) and its variety, *S. Annularis*; the golden osier (*S. Vitellina*); the violet colored (*S. Violacea*); the almond willow and the early willow (*S. præcox*). There are a few varieties which are of a dwarf habit, growing more like bushes than trees, and having beautiful green shining leaves, somewhat resembling the leaves of the European laurel; these are the pentandrous willow (*S. pentandria*), Meyer's willow (*S. Meyeriana*), and the laurel-leaved willow (*S. Laurina*). Cuttings of these can be obtained at nearly every Botanic garden; and since facilities have been afforded for the transmission of cuttings, etc., by mail, they are within the reach of every one.—*Western Rural.*

The Currant Worm.

We hear of their depredations this spring as strongly as ever. Carbolic acid has been found excellent for their destruction. Hellebore is always an unfailing remedy. Judge French, in the Massachusetts Ploughman, gives a few simple directions how to use it.

Buy at the apothecary's some white hellebore (*veratrum album*), which costs about fifty cents a pound. It is in very fine powder, of a brownish hue, and is called white to distinguish it from another variety which is black. Put it into a little bag made of fine muslin that will hold say a gill, and tie the bag to the end of a stick say a foot long and as large round as a ramrod. Open the bushes a little, and sift the hellebore on to the worms and leaves on which they are feeding, and straightway they are dead. Some who have tried it say that the effect is magical—that the worms instantly fall when the least particle touches them, or when they touch a particle of it upon the leaves.

Our worms did not conduct in this extravagant manner. Perhaps the hellebore was not of the best quality; but, as Mercutio said of his wound, "'tis not so deep as a well, nor so wide as a church-door; but 'tis enough, 'twill serve," so our hellebore, though not instantly fatal, was enough. The worms were well powdered on the day after they appeared, and for a week afterward not one could be found alive, although they were at first in large numbers on nearly all the bushes in a row a hundred feet long.

Various other articles have been tried—tobacco water, carbolic soap, and whale-oil soap, and lime in various forms; but I do not learn that anything is so effectual, cheap, and convenient as the hellebore. Some of my neighbors are amusing themselves by picking off the worms by hand, and like that way best. For families who cannot find anything on the farm to do in planting time this may be a delightful recreation; though there are some people whose nervous system is so peculiar that neither food nor sleep would be refreshing after gathering by hand a bushel or two of these disgusting animals.

Objection is made to hellebore that it is poisonous to the fruit. I am informed, however, that it is not a deadly poison to man, and that the small quantity one would be likely to get, even by the careless use of fruit sprinkled with it, would be harmless.

It is used in snuff for its sternutatory or *sneezatory* properties, and perhaps it kills the worms by causing them to sneeze their heads off. I have tried it on caterpillars and canker worms, and they walk off lively covered with it; but to the currant worm it is sure death.

I hear so much nonsense daily about the difficulty of getting rid of the currant worm that I desire to add my personal testimony to that of Dr. Fitch and others as to the efficacy of this specific. I think I can kill more of these worms in one hour with a pound of hellebore than fifty people can pick off in a day; and as to its poisonous qualities, I had much rather chew it than tobacco.

Mr. L. D. Williams, of Meadville, Pa., also gives some notes of observation on this subject, which we also commend to attention:

By carefully examining my bushes, and studying the habits of this voracious pest, I have learned how to dispose of it with very little trouble. The eggs are laid on a few leaves, mostly at the lower part of the bush. My bushes have been as badly infested with them as any bushes could be, for several years past, and I have fought them with ashes, hellebore, and every other remedy that has been recommended, even to Best's Tree Invigorator, which last is the least effective of all, and have succeeded in saving most of my bushes by great vigilance, and no little labor.

This season they had attacked my gooseberries and half eaten them up before I discovered them. I then examined my currants, and found the eggs were deposited on the lower side of a few leaves on every bush, and some had hatched, and were beginning to perforate the leaves with small holes. As my currants are trained in single bushes along the walks of my garden, I could easily examine them, and by turning up the lower leaves I could readily detect those that had eggs on them, and picked them off. I seldom found more than ten or a dozen leaves on a bush infested with them, but if allowed to hatch and grow, there were enough to have devoured all the leaves in a short time. It took but a little while to go over all the bushes in this way. As some would elude my search, I looked day after day, in passing through my garden, to see if there were any leaves perforated, and when I found one, picked it off. In this way I have kept them off, and no bushes could look fresher or more thrifty than mine do, while most persons in this part of the country are having the leaves of theirs entirely devoured, and their currants rendered worthless for the season.

The worm when first hatched is very minute, and does not crawl to the edge of the leaf to feed, as it does when it becomes larger, but eats holes through the leaf. Generally, when one leaf is devoured in this way, the worm has grown to such size as to be able to crawl to other leaves, at first going in families—sometimes a score or more attacking a single leaf—but as they increase in size, they separate, and finally scatter over the whole bush. If the leaf is picked off when it is first perforated, it may be thrown on the ground, and they will die, for they can never reach the bush again by crawling. I find by further observation that they may be entirely neglected until they are hatched, and the leaves are punctured by them. Examine your bushes from the time the currants are well formed, and watch for the perforated leaves. You are not likely to find more than a dozen on the bush. Pick off every such leaf, and your bushes are safe. It is but a moment's work for each bush. I can generally see a leaf which is thus attacked by simply passing along, or going around the bush. I know of no insect pest more easily disposed of. Of course it is too late to adopt this method, for the first crop of worms the present season, if your bushes have been neglected to this time, for most of the worms have grown to large size, and have dispersed over the whole bushes. But if by any means they have been kept off, and a new crop appears, take them in time, watch your bushes, pick off the perforated leaves, and they will give you very little trouble. At least, this is my experience.

I will add that I drove them from my gooseberries, after they had eaten half the leaves off, and were all over the bushes, by the following method. I dissolved coal tar in turpentine, added slaked lime (proportions not very material), and poured in a good supply of water. This made a preparation having a strong smell of carbolic acid. I made a syringe in the form of a common squirt gun, and keeping the mixture well stirred up, threw it plentifully over the bushes until the leaves were white with the lime after they became dry. The worms all disappeared, and though this was two weeks ago, they have not reappeared, the leaves are coming on again, the fruit is sound, and the bushes are fast recovering. I find this an excellent preparation for keeping off many insects. *But it will not drive away the curculio*, and I have been obliged to resort to the old and only effectual remedy known—rapping the tree and killing the insect. It is effectual in protection of cucumbers and other vines from the striped bugs.

Pruning Tomatoes.

EVERYBODY seems to have his own plan for cultivating tomatoes; and just now everybody seems to be putting his plan into the papers. One proposes to pinch down the vine into a kind of dwarf bush—another, proposes to train them on brush; another, to mulch the ground with straw, and let the vine fall down as they choose; another, advises as much manure as you can get—another, as little as you dare. The truth is, tomatoes will grow almost any way, and yield a fair return; but my experience is, that pruning the vines has as great an effect, as it has upon a Catawba grapevine. I tried this plan last summer with wonderful effects. My vines were, last year, (and are this year, and will always be,) right over a secret ditch, in a low moist place—in fact, water ran from the underdrain all the summer, dry as it was. Holes were dug about 3x3 feet apart and 18 inches deep, and and filled with stable manure, and Baugh's phosphate well mixed—that is with all the manure I could get. The vines were worked several times, and then mulched with straw and "laid by." At each hill a stake five feet long, was driven firmly into the ground, and a hole was bored through every stake about the middle, and at the top, with a three-quarter auger bit. The vines were pruned to a single stalk and tied with strips of factory cloth an inch wide to the stalks, and bands going through the holes above mentioned to prevent slipping, (a galvanized nail would be better and easier, a common nail would rot the band in a few days). The vines thus stood about four feet high, were tied in the middle and at the top, and were then allowed to take care of themselves, except that they were pruned heavily throughout the whole season. The result was, magnificent clusters of the largest tomatoes I ever saw, and in spite of the drought, the severest ever known in this region, they bore steadily till frost. To make the experiment complete, some vines were left unpruned—they produced plenty of vine and some small fruit; but after the drought set in, they almost ceased to bear at all. To make the experiment farther complete, I put some vines on high land, and though treated the same way, the vines burnt and died early in the summer. These experiments convinced me completely; or, more exactly, my having an abundance of tomatoes all the summer, when nobody else had any scarcely, convinced me that heavy manuring, constant pruning, tieing up at least four feet high, and planting on a low, moist place, but thoroughly underdrained, will insure the finest tomatoes and the most of them; while unpruned vines, in the same place, did almost nothing, and vines on high land did absolutely nothing.—*Carolina Farmer.*

How to Make a Lawn.

THERE are three modes of forming lawns. The first—to mellow the surface and sow grass seed thickly, which coming up with the weeds, the seeds of which are in the soil, much labor is required afterwards to get all these out by hand. The second is to plow and re-plow, harrow and re-harrow, for a season, in order to work out all the foul seeds, allowing time between each operation for the seeds to germinate, and remembering that many seeds will not grow if buried over an inch deep;

hence the necessity of repeating the stirring many times, in order to bring all parts up to the surface. Then sow fine grass-seed, such as red-top, June grass, white clover, etc., mixed, and at the rate of at least one bushel per acre, rolling it in. This to be done as early as possible in spring, and then, when it is a few inches high, mowing it closely as often as once a week the season through. This will give a handsome green carpet-like velvet. The third mode, usually the most expensive, but the most speedy and certain if well performed, is to *turf* the surface. First make the soil deep and mellow, and even at the surface; then pare from an old pasture the turf, cut very smooth, with perfectly parallel and straight sides, and of a perfectly uniform thickness of about two and a half inches; spread this turf over the mellow surface, as smooth as a floor, and roll evenly. If manure is applied to make the soil rich, it must be finely pulverized and thoroughly and very evenly worked in.—*Small Fruit Recorder.*

Notes from Our Contributors.

About Girdling Trees.

GIRDLE your apple trees according to Webster's definition of girdle, and they may bear fruit well for *three years*, but, my word for it, the end will then come. I have seen the bark carefully removed from the trunks without injury to the tree. A White Beech will live three years after girdling, while a Chestnut will die about as quick as if it had been cut down. OBSERVER.

WILLIAMSBURGH, MASS.

The Currant Worm.

FOR the information of your correspondent W. H. W., in March number, page 70, I would say that I do not believe that the raspberry, by growing in the immediate vicinity, has any power to prevent the ravages of the currant worm. I have currants and raspberries growing near to each other in the garden, and cannot see that they are any more exempt than those more remote. A neighbor has a plantation of currants and raspberries so near to each other that the raspberries have sent up shoots in the midst of the currant bushes, and the worms have been as severe on them as any in his garden. GEORGE CRUICKSHANKS.

WHITINSVILLE, MASS.

THE experience of your Fredonia correspondent, given in June number, would seem to indicate that the odor of the black currant would drive away the currant worm. It has been my practice, in planting red and white currants in nursery, to separate the varieties not only with a stake, but with a black currant cutting, and have seen the red currant stripped, when the branches extended into black currant bushes of good size, by the worm of the gooseberry saw-fly, which is the worst enemy to the currant. Can't say positively that I have seen the worm eat the leaves of the black currant, but have seen black currant bushes stripped by the worm of the currant moth, which is a measure worm. We must bear in mind that currants, though not as sweet as liberty, can only be secured by the same means—"eternal vigilance." GEORGE T. FISH.

ROCHESTER, N. Y.

Mammoth Cluster Raspberry.

I WOULD like Mr. A. M. Purdy to state the difference there is between the Mammoth Cluster and the Collinsville Miami, as it is called, and sometimes called McCormick. I have both growing together, and cannot see any difference in the plants; they are just coming in flower, and the fruit-buds show about equal in both. I shall note the time of each in flowering, also the time of fruit and ripening. There are others also who would like to know the difference, so they may be able to tell whether they have genuine plants. Mine came from their nursery, in Indiana, and so supposed to be true to name. G. DREW.

BUNKER HILL, ILL.

Ivy.

ALLOW me to come with a query which I have for months hoped some one else would bring to you. Is there not an oversight in Anne G. Hale's January article, "Parlor Vines," where she speaks of Hedera Canariensis as the Irish *or German* Ivy? Will you be so kind as to inform me whether the Irish Ivy (Hedera Canariensis) is ever known as German Ivy? The vine commonly called German Ivy is certainly Senecio Scandens, a plant having nothing in common with the true ivies, except the form and general appearance of the leaf. This Senecio possesses all the good qualities attributed in "Parlor Vines" to "Irish or German Ivy." The foliage is beautiful, and the growth is very rapid, sometimes—even in mid-winter—exceeding four (4) inches of increase in twenty-four hours. The flower is rather insignificant, but the fact that a cutting taken in August will, if given sufficient light and water in a warm room, bloom profusely in January, is a strong recommendation to the notice of some persons. By pinching off its shoots the plant may be made to answer well for a hanging basket or pot, the leaves becoming larger, under such circumstances, than when the vine is permitted to grow long. J. Y. McK.

A Trap for the Rosebugs.

Every one who has become at all acquainted with the habits of the rosebug, must have noticed that they have a very decided preference for some varieties of grape over others. This fact may well be improved to preserve our choice varieties from their ravages. The Clinton is one of their special favorites. If one of these is planted in the neighborhood of others, the latter will be comparatively neglected by the rosebugs, who will concentrate nearly all their attentions upon the Clinton.

I have, in my garden, a seedling of the Golden Clinton, that I consider one of my most valuable vines, though it has never borne a grape, and never will. Its value consists in its special attractiveness to the rosebugs. They swarm on this, while others are almost abandoned by them. I have just picked nearly a handful from the seedling, while on a good sized Iona, right beside it, I could find but a single one. It is worth while to have one Clinton in the garden, or an occasional one in the vineyard, as a trap for these destructive pests. W. H. W.

I see the Nicanor Strawberry is said, by some, to blossom and ripen before any other. In my grounds the *Florence*, growing alongside the Nicanor, blossomed about a week before it, and precedes it quite as much in the time of ripening. It is not so *marvelously* productive, but it is of considerably larger size, and, in my judgment, of better flavor. Indeed, I think the Florence one of the best varieties (all things considered) that I have yet found. W. H. W.

Reading, Mass.

Girdling Fruit Trees.

In your issue for this month, John F. Johnson says: "I think it is not generally known that *girdling* fruit trees will cause fruitfulness." I think so, too—never will be. The unguarded and unqualified manner in which this statement is made, is liable to lead young and inexperienced fruit growers into errors of practice that will surely bring them to "grief" if they enter practically into the experiment, and he ought not "teach men so."

Whatever the Benton Harbor experiment might have been, I know that to thoroughly girdle a tree—that is, to remove a strip of bark *clean to the wood*, encircling the trunk of the tree is an exceedingly dangerous practice; if it do not kill the tree outright, it will greatly reduce its fruit bearing capacity, and should not be tried by any but experts in physiological freaks. The writer has seen this innovation upon natures laws made upon grape vines and apple trees, but with no degree of success that should enter into practice.

The knife of *experiment* is a dangerous weapon in any other than an experienced hand; and statements so void of explanation in regard to the manner in which the work is to be done, will lead to the sacrifice of many a fruit tree if indulged in. I have girdled deciduous trees for the sake of the experiment, and when thoroughly done, when the *inner lining* of the bark was removed, it invariably proved fatal to the tree.

To produce fruitfulness by checking the tendency to false bloom, if the trees are not more than ten or twelve years old, I would take up and reset, which is much more effectual, and much safer than girdling in any form, so far as my experience and observation go. L. L. P.

East Jeffrey, N. H.

Editorial Notices.

Reduction of Subscription Terms.

Desiring to see The Horticulturist taken by many who have not hitherto read it, we will send it the remaining six months of this year for *One Dollar*. Our Club Terms are also reduced, and worthy of special attention. Many can now take it freely who have felt the previous terms were too high. We will supply clubs as follows: Three copies, one year, $5; five copies, $7.50 (only $1.50 a year each). We will be pleased to have our friends interest themselves and form clubs everywhere. These terms now render The Horticulturist the cheapest journal of its class in the country, and within the means of every one of rural taste.

Pansies.

Mr. Henry A. Dreer, of Philadelphia, has made the culture of Pansies a specialty for a number of years, and his Pansy seed has become quite celebrated. We invite attention to his announcement in our columns.

Get up a Club This Fall for the Horticulturist.

Hereafter only $1.50 a year in clubs of five, *and a copy free.*

Errata.

On page 197, June number, read Alburnum, in place of Albumen.
On page 100, proper spelling of pear is "Josephine de Malines."